

Statische Berechnung
Antennen-Gittermast Typ L 40 mit
HY-GAIN Antenne LP1007

Generalstab
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Sektion Botschaftsfunk
Obermurnau
3423 Ersigen

Rümlang, im Dez. 2000

Sehr geehrter Herr Kräuchi,

Aufgrund der beiliegenden statischen Berechnung können wir Ihnen auf Wunsch der Sektion Botschaftsfunk Folgendes bestätigen:

Während der letzten 22 Jahren haben wir (Letrona und früher Wicker-Bürki) für den Botschaftsfunk über 30 Mastsysteme vom Typ WGM-40 geliefert. Diese Masten wurden dann gemäss den Vorschriften auf der Zeichnung ZZZ-52.3 weltweit durch den Botschaftsfunk installiert.

Nach Aussage von Herrn H. Meier, unserem pensionierten Statiker, wurde das System damals vor ca. 20 Jahren für eine Windgeschwindigkeit von 120 km/h ausgelegt.

Leider konnte jetzt, nach dieser langen Zeit, nirgends ein schriftliches Dokument über diese Tatsache gefunden werden, weder in unserer Firma noch beim Botschaftsfunk.

Wir haben daher die Angaben auf der Zeichnung ZZZ-52.3 überprüft und können bestätigen, dass diese Mastkonstruktionen einer Windgeschwindigkeit von 120 km/h standhalten.

Allerdings müssen die folgenden Bedingungen eingehalten werden:

- der Aufbau muss gemäss der Zeichnung ZZZ-52.3 erfolgen
- es dürfen nur die dort erwähnten Bauteile verwendet werden
- der Mast ist nur für eine Antenne vom Typ Hy-gain LP 1007 bestimmt, das Anbringen weiterer Antennen oder Geräte ist nicht erlaubt
- die Montage muss fachgerecht ausgeführt sein, insbesondere das Konfektionieren und Befestigen der Abspannungen, welche in der Lage sein müssen, die Torsionskräfte, die von der Antenne übertragen werden, aufzufangen.

Wir hoffen, Ihnen mit diesen Angaben gedient zu haben.

Mit freundlichen Grüssen

K. Wicker LETRONA AG

K. Wicker

Beilage: detaillierte, statische Berechnung

9504 Frittschen, 21. Dezember 2000

Statische Berechnung

Bauherr: Bundesamt für Uebermittlungstruppen 3000 Bern

Bauobjekt: Antennen-Gittermast HY-GAIN LP-1007: Typ L40

Bauvorhaben: Alu-gittermast Typ L40/180 abgespannt
Belastungen: HY-GAIN LP-1007
(max. Windgeschwindigkeit V= 120 km/h) H= 18.0 m W= 1705N

Berechnungsgrundlagen:

- Baumaterial: siehe beiliegende Grundlagen zur Berechnung!

-Zul. Spannungen: siehe beiliegende Grundlagen zur Berechnung!

-Belastungen: Horizontal: Antennenbelastung gemäss Angaben Kunde
Windlasten: nach DIN 4131
Windgeschwindigkeit V= 120km/h Tragfähigkeit+ Gebrauch

Vertikal: Antennenlasten: nach Angabe Hersteller
Eigengewicht Tragwerk: Durch Berechnungssoftware direkt in Rechnung eingeführt.

-Vereisung: Vereisung auf Tragwerk: wird nicht in die Berechnung eingeführt. Von Verwendung bei exponierten Standorten mit Vereisungsgefahr wird abgeraten.

-Nachweis: Die Berechnung erfolgt mit Software Rstab nach FEM-Methode. Es wird nach Theorie I. Ordnung und Theorie II. Ordnung (alle Lasten mit Faktor 1.5) gerechnet. Die massgebenden Schnittkräfte werden dem Spannungsnachweis zu Grunde gelegt.

Letrona AG
E. Mäder, dipl. Ing. HTL



Grundlagen Mastberechnung:

Querschnitte:	Eckpfosten	ROR 40/36 Anticorodal 110 / 61	$\sigma_{0,2} = 255 \text{ N/mm}^2$
	Aussteifung	Profil Nr. R 19767-2 Anticorodal 110 / 61	$\sigma_{0,2} = 255 \text{ N/mm}^2$
	Pfostenverbindung	Bridenprofil 48/40-200 Anticorodal 110 / 61	$\sigma_{0,2} = 255 \text{ N/mm}^2$
	Schrauben	Stahl A2/5.6	$\sigma_{zul} = 150 \text{ N/mm}^2$
	Abspannseile	INOX-Stahlseil Brugg Nr. 04193	$P_{Bruch} = 9000 \text{ N}$

System: Mehrfach abgespannter Antennenträger, Abspannpunkte je OK Mastelement mit Länge 3000 mm. Berechnung mit Windangriff in Ebene einer Abspannung.

Antenne:	HY GAIN LP 1007	Antennengewicht	102 kg
		Windlast $V = 130 \text{ km/h}$	2000N
		bei $V = 120 \text{ km/h}$	1705N
		Torsionsfrei gelagert!	

Berechnung Windlast für Mastelemente: Staudruck $q_0 = 0.694 \text{ KN/m}^2$

Ohne Vereisung:

	Umrissfläche Mastkonstruktion	290/3000	0.87
	Fläche Eckpfosten	$40 \times 3000 \times 2$	0.24
	Fläche Aussteifungen	9 Stk. $40 \times (310-80)$	0.0828
	Total Stabfläche		0.3228
	Völligkeitsgrad ohne Eis		0.371

Mit Vereisung allseitig

	Umrissfläche Mastkonstruktion	350/3000	1.05
	Fläche Eckpfosten	$100 \times 3000 \times 2$	0.6
	Fläche Aussteifungen	9 Stk. $100 \times (370-200)$	0.153
	Total Stabfläche		0.753

Völligkeitsgrad ohne Eis

0.717

Eigenwind Mast:

Annahme: Räumliche Fachwerke aus Kreiszylinderrohren

ohne Vereisung:

Abminderungsfaktor ψ	0.98
Reynoldszahl Re	1.1×10^5
Grundkraftbeiwert c_0	1.45
Windlast pro Element	0.318KN

mit Vereisung 30 mm:

Abminderungsfaktor ψ	0.98
Reynoldszahl Re	2.7×10^5
Grundkraftbeiwert c_0	0.98

Abminderung gem. DIN 4131:

75%

Windlast pro Element

0.376KN

Windlasten auf Abspannseile werden direkt in die Knoten eingeführt.

Mastberechnung erfolgt mit Vergleichsträgheitsmoment! $J = 746.2 \text{ cm}^4$

Spannungsrechnung:

o Tragquerschnitt: Biegemoment

$3 \times \phi 40/36 \text{ ALU } F32$

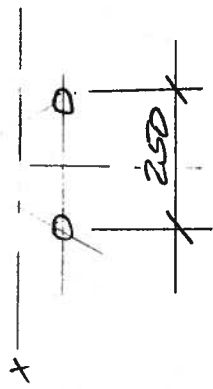
$M_{max} = 2262 \text{ Nm} \quad M_{max} = 17620 \text{ N}$

$M' = 1028 \text{ Nm} \quad M_{max} = 19'233 \text{ N}$

y

$I_z = 239 \text{ mm}^4$

$I_{zz} = 717 \text{ mm}^2$



$J_{x_1} = 239 (144,3^2 + 2 \cdot 72 \cdot 2^2)$
 $= 746,8 \text{ cm}^4$

$J_{y_1} = 239 \cdot 2 \cdot 125^2 = 746,8 \text{ cm}^4$

$J_c = 4,32 \text{ cm}^4$

Annahme: Knicklänge des Systems aus der Tragebene: $L_k = L_{max} = 7,0 \text{ m}$

lokale Schlankheitsgrade: $\lambda_x = 72 \text{ mm}$
 $\lambda_y = 125 \text{ mm}$

$\lambda_{y_1} = \lambda_{x_1} = \sqrt{\left(\frac{7000}{72}\right)^2 + \left(\frac{1330}{13,44}\right)^2} = 100,3$

$\lambda_{z_1, ALU} = 5,5 \quad \sigma_{max} = \frac{P_{max}}{F_{0,1}} + \frac{2M}{250 \cdot 72 \cdot F_c}$

$\sigma_{max} = \frac{17620 \cdot 5,5}{717} + \frac{2262000 \cdot 2}{250 \cdot 72 \cdot 239} = 178,9 \text{ N/mm}^2$

$\sigma' = \frac{19233 \cdot 5,5}{717} + \frac{1028000 \cdot 2}{250 \cdot 72 \cdot 239} = 167,4 \text{ N/mm}^2$

Lehrstuhl

$$\underline{\underline{\tau_{max} = 178,9 \text{ N/mm}^2 < \tau_{zul} = 236 \text{ N/mm}^2}}$$

$$\tau_{zul} = \sigma_{0,2} / 1,1 = 260 / 1,1 = 236 \text{ N/mm}^2$$

(Berechnung nach Theorie II. Ordnung)

• Massquerschnitt: Querkräfte

Übertragung der Querkräfte durch Rohrquerschnitte $3 \times \phi 40/36$.

$$F_{max} = 9/3 \text{ N} \quad \sigma_{max} = \frac{9/3}{3} = 304 \text{ N}$$

$$\tau_{max} = \frac{304 \cdot 2}{239} = 2,5 \text{ N/mm}^2 < \tau_{zul}$$

• Rohrstress:

Biegungsnachweis erfüllt: es Reeschnitt
Brücke grösser als Rohrquerschnitt!

Übertragung Druck:

→ Böden $\phi 8$, $\phi 2$, 2-seitig

$$F_{max, 2} = 1762 \text{ N} \quad P_{2/3} = 5873 \text{ N}$$

$$F_{max} = 2262 \text{ Nm} \quad P_D = \frac{2262 \cdot 100 \cdot 2}{250 \cdot \sqrt{3}}$$

$$P_D = 10'448 \text{ N}$$

$$P_{max} = 5873 + 10'448 = 16321 \text{ N}$$

Lehrplan

$$\bar{\sigma}_{max} = \frac{16321,4}{2 \cdot 3 \cdot 50,3} = 216,3 \text{ N/mm}^2 > \bar{\sigma}_{el}$$

→ Druckkräfte müssen über Stirnflächen übertragen werden!

Übertragung Zug:

→ Bolzen $\phi 8$, $\phi 12$, 2-schrittig

$$P_{max} = P_{D1} - P_{D3} = 10440 - 5073$$

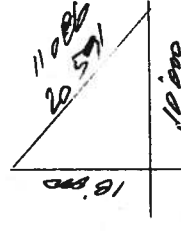
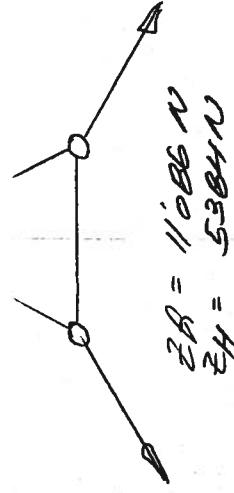
$$P_{max} = 4575 \text{ N}$$

$$\bar{\sigma}_{max} = \frac{4575 \cdot 4}{2 \cdot 3 \cdot 50,3} = 60,6 \text{ N/mm}^2 < \bar{\sigma}_{el}$$

$$\bar{\sigma}_{el} = G_{0,2}/13 = 136 \text{ N/mm}^2 \text{ (11. Normung)}$$

• Querverband:

→ Zugkräfte aus Kesselnungen!



Querschnitt: $40/5$ ALu $F32$

$$\bar{\sigma}_{max} = \frac{5384}{5 \cdot 40} = 26,9 \text{ N/mm}^2 < \bar{\sigma}_{el} = 236 \text{ N/mm}^2$$

• Abspannseile:

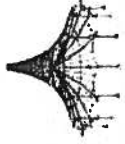
Not-Seile 4 mm

min. Bruchkraft: $P_B = 9000 \text{ N}$ $P_{\text{verk}, 1,5} = 6219 \text{ N}$ $P_{1,0} = 4146 \text{ N}$

Bruchsicherheit:

$$n_B = \frac{9000}{4146} = \underline{\underline{2,17}}$$

Seilzubehör (Schökel, Sebkoten etc.)
muss mind. die Bruchkraft der
Seile aufweisen!



Projekt: Allgemein

Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

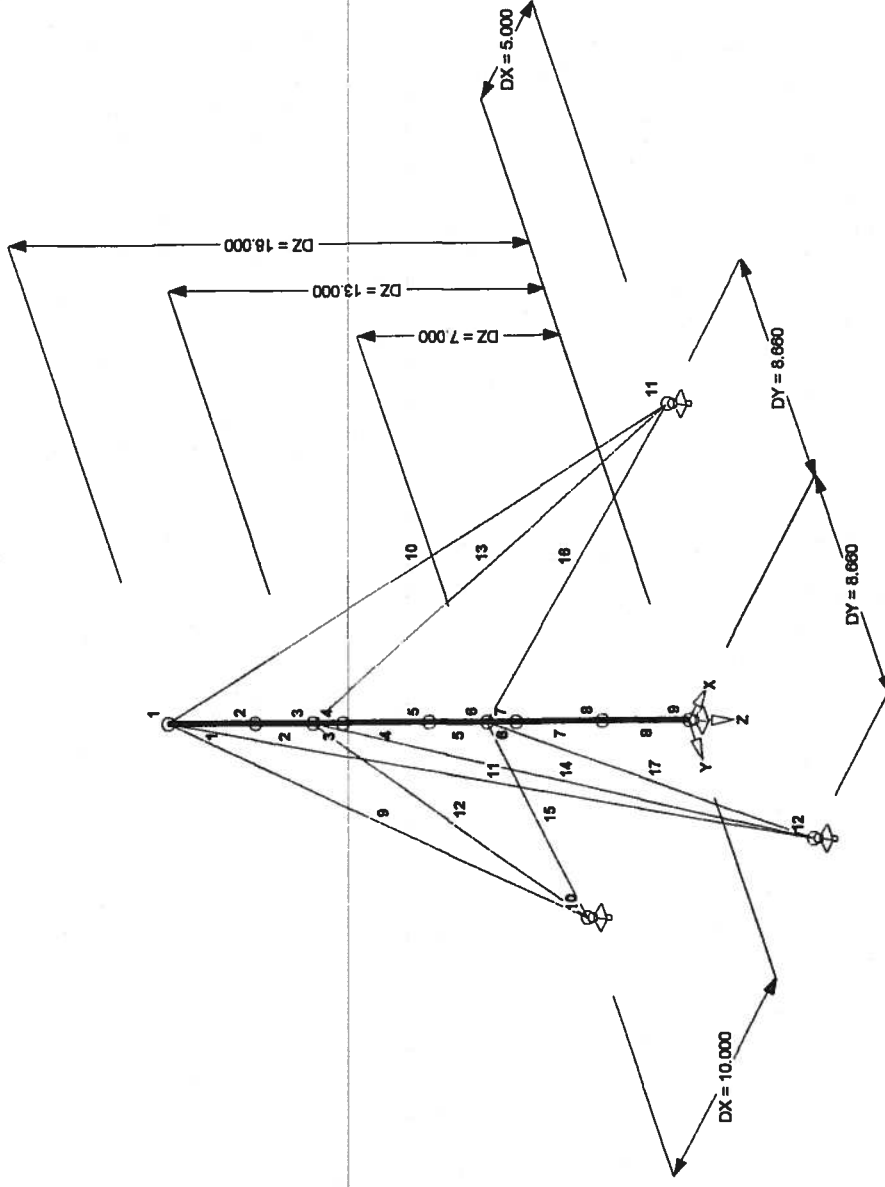
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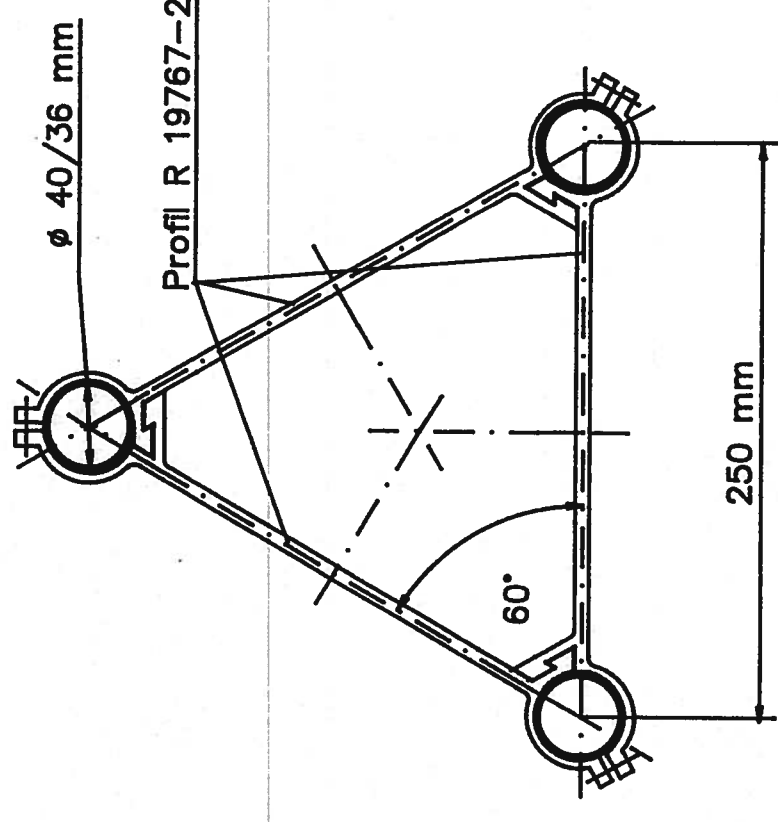
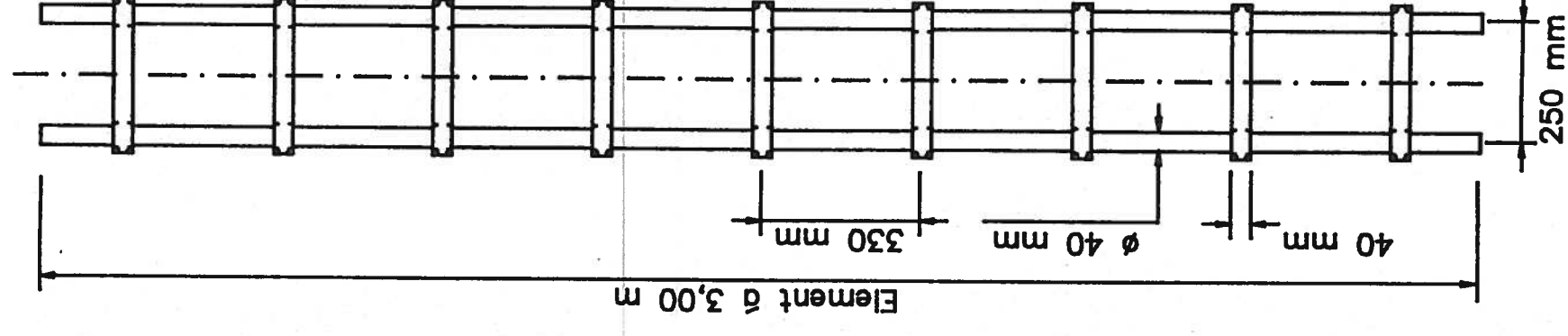
STRUKTUR

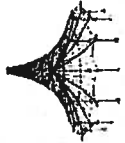
Knotennummerierung
Stabnummerierung

Isometrie



Plan pour pylone type L - 40 schema





Projekt: Allgemein

Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

Seite: 1

21.12.2000

INHALT

Inhalt	1
Basisangaben	1
Strukturdaten	1
Knoten	1
Materialien	2
Querschnitte	2
Stäbe	2
Auflager	2
Belastungen	2
Basisangaben der Lastfälle	2
LF 1 - VERTIKALLASTEN MAST UND ANT. ohne Eis	2
LF 2 - VERTIKALLASTEN EIS	3
LF 4 - HORIZ. V= 120 km/h in -X ohne Eis	3
LF 5 - HORIZ. V= 120 km/h in +X ohne Eis	3
LF 6 - HORIZ. V= 120 km/h in -X mit Eis	3
LF 7 - HORIZ. V= 120 km/h in +X mit Eis	4
LF-Gruppen	4
LF-Kombinationen	4
LF-, LG-Ergebnisse	4
Daten zur Theorie II. Ordnung	4
Schnittgrößen stabbbezogen	4
Auflagerkräfte und -momente	8
Globale Knotenverformungen	8
LK-Ergebnisse	8
Max/Min/Zugch-Schnittgrößen stabbbezogen	9
Max/Min/Zugch-Auflagerkräfte und -momente	30
Max/Min globale Knotenverformungen	32
STAHL1 - Spannungsanalyse	33
Basisangaben	33
Grenzspannungen	33
Querschnitte	33
DYNAM1 - Dynamische Analyse	34
Basisangaben	34
Knoten-Zusatzmassen	34
Stab-Zusatzmassen	34

BASISANGABEN

BERECHNUNGSART

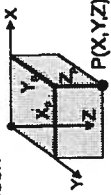
- ☒ Statik
☐ Nachweis
☒ Dynamik
- ☒ Lastfälle
☒ LF-Gruppen
☒ F-Kombinationen
- ☒ Theorie I. Ordnung
☒ Theorie II. Ordnung
☒ Seiltheorie
- ☒ Bemessungsfälle
☒ Dynamikfälle
☐ Knickfiguren

STRUKTURKENNWERTE

- ☐ D-Durchlaufträger
☐ 2D-Stabwerk
☒ 3D-Stabwerk
☐ Trägerrost
- 13 Knoten
2 Materialien
2 Querschnitte
0 Stabendgelenke
0 Stabteilungen
- 17 Stäbe
9 Seilstäbe
0 Voutenstäbe
0 Ei. gebet. Stäbe
0 Stabzölge

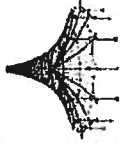
STRUKTUR

Kartesisch



KNOTEN

Knoten-Nr.	Koordinaten-system	Bezugs-Knoten	X [m]	Knotenkoordinaten Y [m]	Z [m]
1	Kartesisch	-	0.000	0.000	-18.000
2	Kartesisch	-	0.000	0.000	-15.000
3	Kartesisch	-	0.000	0.000	-13.000
4	Kartesisch	-	0.000	0.000	-12.000
5	Kartesisch	-	0.000	0.000	-9.000
6	Kartesisch	-	0.000	0.000	-7.000
7	Kartesisch	-	0.000	0.000	-6.000
8	Kartesisch	-	0.000	0.000	-3.000
9	Kartesisch	-	0.000	0.000	0.000
10	Kartesisch	-	-10.000	0.000	0.000
11	Kartesisch	-	5.000	-8.660	0.000
12	Kartesisch	-	5.000	8.660	0.000
13	Kartesisch	-	-9.400	0.000	-1.000



Projekt: Allgemein

Position: WIPIC-L40-Gittermast 18m
Gittermast abgsp. L180-Typ L40

Seite: 2

21.12.2000

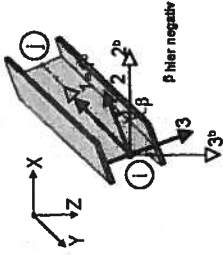
MATERIALIEN

Mat.-Nr.	Material-Bezeichnung	E-Modul [N/mm²]	Schubmodul [N/mm²]	Sp. Gewicht [N/mm³]	Wärmedehn. [1/°C]
1	Aluminium	7.000E+04	2.700E+04	2.700E-05	2.400E-05
2	Stahl	2.100E+05	8.100E+04	7.850E-05	1.200E-05

QUERSCHNITTE

Quer.-Nr.	Mat.-Nr.	Querschnitts-Bezeichnung	I-T A	I-2 A-2	I-3 [mm⁴] A-3 [mm²]
1	1	Gitter L40	1000000.	7462000.	7462000.
2	2	INOX-Seil 04	10000.	10000.	718.0
			13.0	13.0	10000.
					13.0

Lokales Stabachsensystem



STÄBE

Stab-Nr.	Stab-typ	Knoten Anf.	Knoten Ende	Beta [°]	Querschnitt Anf.	Querschnitt Ende	Gelenk Anf.	Gelenk Ende	Teil-Nr.	Länge [m]	Stab-lage
1	Balken	1	2	0.0	1	1	-	-	-	3.000	VERT
2	Balken	2	3	0.0	1	1	-	-	-	2.000	VERT
3	Balken	3	4	0.0	1	1	-	-	-	1.000	VERT
4	Balken	4	5	0.0	1	1	-	-	-	3.000	VERT
5	Balken	5	6	0.0	1	1	-	-	-	2.000	VERT
6	Balken	6	7	0.0	1	1	-	-	-	1.000	VERT
7	Balken	7	8	0.0	1	1	-	-	-	3.000	VERT
8	Balken	8	9	0.0	1	1	-	-	-	3.000	VERT
9	Seil	1	10	0.0	1	1	-	-	-	20.591	ALLG
10	Seil	1	11	0.0	2	2	-	-	-	20.591	ALLG
11	Seil	1	12	0.0	2	2	-	-	-	20.591	ALLG
12	Seil	3	10	0.0	2	2	-	-	-	16.401	ALLG
13	Seil	3	11	0.0	2	2	-	-	-	16.401	ALLG
14	Seil	3	12	0.0	2	2	-	-	-	16.401	ALLG
15	Seil	6	10	0.0	2	2	-	-	-	12.207	ALLG
16	Seil	6	11	0.0	2	2	-	-	-	12.208	ALLG
17	Seil	6	12	0.0	2	2	-	-	-	12.206	ALLG

AUFLAGER

Lager-Nr.	Gelegerte Knoten	Drehung [°] Alpha	Beta	in X	in Y	in Z	Festes Auflager bzw. Feder [N/m] [Nm/rad]	um X	um Y	um Z
1	9	0.0	0.0	Ja	Ja	Ja	Ja	Ja	Ja	Ja
2	10	0.0	0.0	Ja	Ja	Ja	Nein	Nein	Nein	Nein
3	11	0.0	0.0	Ja	Ja	Ja	Nein	Nein	Nein	Nein
4	12	0.0	0.0	Ja	Ja	Ja	Nein	Nein	Nein	Nein

BELASTUNG

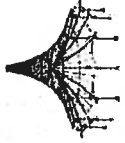
BASISANGABEN DER LASTFÄLLE

LF-Nr.	LF-Bezeichnung	Faktor	Überlagerungsart	Eigengewicht
1	VERTIKALLASTEN MAST UND ANT. ohne Eis	1.00	Veränderlich	1.00
2	VERTIKALLASTEN EIS	1.00	Veränderlich	1.00
4	HORIZ. V=120 km/h in -X ohne Eis	1.00	Veränderlich	-
5	HORIZ. V=120 km/h in +X ohne Eis	1.00	Veränderlich	-
6	HORIZ. V=120 km/h in -X mit Eis	1.00	Veränderlich	-
7	HORIZ. V=120 km/h in +X mit Eis	1.00	Veränderlich	-

KNOTENKRÄFTE

Nr.	Beibehaltene Knoten	P-X [N]	Knotenkräfte P-Y [N]	P-Z [N]
1	1	0.000	0.000	1020.000

LF 1



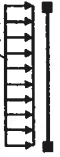
Projekt: Allgemein	Position: WIPIC-L40-Gittermast 18m Gittermast abgesp. L180-Typ L40	Seite: 3 21.12.2000
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STABLASTEN

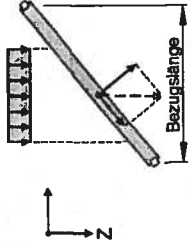
LF 1

Nr.	Belastete Stäbe	Lasttyp Nr.	Last- Richtung	P-1	P-2	Belastungsparameter [N, Nm, m, °C]	A	B
1	1-8	1	Z	30.000				

1- Linienlast



Z - Global in Z-Richtung



STABLASTEN

LF 2

Nr.	Belastete Stäbe	Lasttyp Nr.	Last- Richtung	P-1	P-2	Belastungsparameter [N, Nm, m, °C]	A	B
1	1-8	1	Z	150.000				

KNOTENKRÄFTE

LF 4

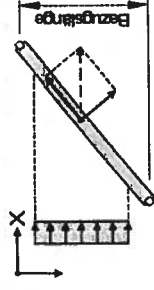
Nr.	Belastete Knoten	P-X [N]	Knotenkräfte P-Y [N]	P-Z [N]
1	1	-1705.000	0.000	0.000
2	1	-90.000	0.000	0.000
3	3	-65.000	0.000	0.000
4	6	-35.000	0.000	0.000

STABLASTEN

LF 4

Nr.	Belastete Stäbe	Lasttyp Nr.	Last- Richtung	P-1	P-2	Belastungsparameter [N, Nm, m, °C]	A	B
1	1-8	1	X	-106.00				

X - Global in X-Richtung



KNOTENKRÄFTE

LF 5

Nr.	Belastete Knoten	P-X [N]	Knotenkräfte P-Y [N]	P-Z [N]
1	1	1705.000	0.000	0.000
2	1	90.000	0.000	0.000
3	3	65.000	0.000	0.000
4	6	35.000	0.000	0.000

STABLASTEN

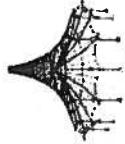
LF 5

Nr.	Belastete Stäbe	Lasttyp Nr.	Last- Richtung	P-1	P-2	Belastungsparameter [N, Nm, m, °C]	A	B
1	1-8	1	X	106.000				

KNOTENKRÄFTE

LF 6

Nr.	Belastete Knoten	P-X [N]	Knotenkräfte P-Y [N]	P-Z [N]
1	1	-1705.000	0.000	0.000
2	1	-90.000	0.000	0.000
3	3	-65.000	0.000	0.000
4	6	-35.000	0.000	0.000



Projekt: Allgemein

Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

Seite: 4

21.12.2000

BELASTUNG

STABLASTEN

LF 6

Nr.	Belastete Stäbe	Lasttyp Nr.	Last- Richtung	Belastungsparameter [N, Nm, m, °C]			
				P-1	P-2	A	B
1	1-8	1	X	-125.00			

KNOTENKRÄFTE

LF 7

Nr.	Belastete Knoten	P-X [N]	Knotenkräfte P-Y [N]		P-Z [N]	
1	1	1705.000	0.000	0.000	0.000	0.000
2	1	90.000	0.000	0.000	0.000	0.000
3	3	65.000	0.000	0.000	0.000	0.000
4	6	35.000	0.000	0.000	0.000	0.000

STABLASTEN

LF 7

Nr.	Belastete Stäbe	Lasttyp Nr.	Last- Richtung	Belastungsparameter [N, Nm, m, °C]			
				P-1	P-2	A	B
1	1-8	1	X	125.000			

LF-GRUPPEN

LG-Nr.	LG-Bezeichnung	Faktor	Lastfälle in LG
1	GRENZWERTE TRAGLAST in X+ ohne Eis	1.50	LF1 + 1.08*LF5
2	GRENZWERTE TRAGLAST in X+ mit Eis	1.50	LF1 + LF2 + 1.15*LF7
3	GRENZWERTE TRAGLAST in X- ohne Eis	1.50	LF1 + 1.08*LF4
4	GRENZWERTE TRAGLAST in X- mit Eis	1.50	LF1 + LF2 + 1.15*LF6

LF-KOMBINATIONEN

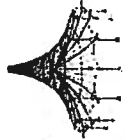
LK-Nr.	LK-Bezeichnung	Faktor	Kombinationskriterium
1	Tragfähigkeit in X+ ohne Eis		LF1/Sändig + 1.08*LF5
2	Tragfähigkeit in X+ mit Eis		LF1/Sändig + LF2 + 1.28*LF5
3	Tragfähigkeit in X- ohne Eis		LF1/Sändig + 1.08*LF6
4	Tragfähigkeit in X- mit Eis		LF1/Sändig + LF2 + 1.28*LF7

DATEN ZUR THEORIE II. ORDNUNG

LG-Nr.	Faktor Ny	Beiwert Gamma-M	Anzahl Iterationen	Verhanden	Eps-Konvergenz Gewollt	Ny-fache Ergebnisse	Erlastung durch Zugkräfte
LG1	1.500	1.00	9	.00E+00	0.01	Ja	Nein
LG3	1.500	1.00	13	.00E+00	0.01	Ja	Nein

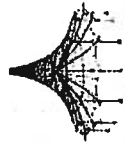
SCHNITTGRÖSSEN STABBEZOGEN

Stab-Nr.	LFI/LG-Nr.	Knoten-Nr.	x [m]	N	Kräfte [N]		Q-3	T	Momente [Nm]	
					Q-2	N			M-2	M-3
1	LG1	1	.00	-7000.10	.00	-23.89	.00	.00	.00	.00
		2	3.00	-7222.10	.00	485.46	.00	705.28	.00	
		Max N	.00	-7000.10	.00	-23.89	.00	.00	.00	
		Min N	3.00	-7222.10	.00	485.46	.00	705.28	.00	
		Max Q-2	.00	-7000.10	.00	-23.89	.00	.00	.00	
		Min Q-2	.00	-7000.10	.00	-23.89	.00	.00	.00	
		Max Q-3	3.00	-7222.10	.00	485.46	.00	705.28	.00	
		Min Q-3	.00	-7000.10	.00	-23.89	.00	.00	.00	
		Max M-2	3.00	-7222.10	.00	485.46	.00	705.28	.00	
		Min M-2	.15	-7011.20	.00	2.13	.00	-1.10	.00	
		Max M-3	.00	-7000.10	.00	-23.89	.00	.00	.00	
		Min M-3	.00	-7000.10	.00	-23.89	.00	.00	.00	
	LG3	1	.00	-12311.4	.00	-182.43	.00	.00	.00	
		2	3.00	-12533.4	.00	-686.02	.00	-1307.47	.00	
		Max N	.00	-12311.4	.00	-182.43	.00	.00	.00	
		Min N	3.00	-12533.4	.00	-686.02	.00	-1307.47	.00	



SCHNITTGRÖSSEN STABBEZOGEN

Stab-Nr.	LF/LG-Nr.	Knoten-Nr.	x [m]	Kräfte [N]		T	Momente [Nm]	
				N	Q-2		M-2	M-3
1	LG3	Max Q-2	.00	-12311.4	.00	.00	-182.43	.00
		Min Q-2	.00	-12311.4	.00	.00	-182.43	.00
		Max Q-3	.00	-12311.4	.00	.00	-182.43	.00
		Min Q-3	3.00	-12533.4	.00	.00	-666.02	.00
		Max M-2	.00	-12311.4	.00	.00	-182.43	.00
		Min M-2	3.00	-12533.4	.00	.00	-666.02	.00
		Max M-3	.00	-12311.4	.00	.00	-182.43	.00
		Min M-3	.00	-12311.4	.00	.00	-182.43	.00
		Max N	.00	-7222.10	.00	.00	485.46	.00
		Min N	2.00	-7370.09	.00	.00	794.44	.00
2	LG1	Max N	2.00	-7370.09	.00	.00	485.46	.00
		Min N	2.00	-7370.09	.00	.00	794.44	.00
		Max Q-2	.00	-7222.10	.00	.00	485.46	.00
		Min Q-2	.00	-7222.10	.00	.00	485.46	.00
		Max Q-3	2.00	-7370.09	.00	.00	794.44	.00
		Min Q-3	.00	-7222.10	.00	.00	485.46	.00
		Max M-2	.00	-7370.09	.00	.00	794.44	.00
		Min M-2	.00	-7222.10	.00	.00	485.46	.00
		Max M-3	.00	-7222.10	.00	.00	485.46	.00
		Min M-3	.00	-7222.10	.00	.00	485.46	.00
3	LG3	Max N	.00	-12533.4	.00	.00	-666.02	.00
		Min N	2.00	-12681.4	.00	.00	-913.30	.00
		Max Q-2	.00	-12533.4	.00	.00	-666.02	.00
		Min Q-2	.00	-12533.4	.00	.00	-666.02	.00
		Max Q-3	.00	-12533.4	.00	.00	-666.02	.00
		Min Q-3	2.00	-12681.4	.00	.00	-913.30	.00
		Max M-2	.00	-12533.4	.00	.00	-666.02	.00
		Min M-2	.00	-12533.4	.00	.00	-666.02	.00
		Max M-3	.00	-12533.4	.00	.00	-666.02	.00
		Min M-3	.00	-12533.4	.00	.00	-666.02	.00
4	LG1	Max N	1.00	-9513.57	.00	.00	-704.32	.00
		Min N	1.00	-9513.57	.00	.00	-704.32	.00
		Max Q-2	.00	-9513.57	.00	.00	-704.32	.00
		Min Q-2	.00	-9513.57	.00	.00	-704.32	.00
		Max Q-3	1.00	-9513.57	.00	.00	-704.32	.00
		Min Q-3	.00	-9513.57	.00	.00	-704.32	.00
		Max M-2	.00	-9513.57	.00	.00	-704.32	.00
		Min M-2	.00	-9513.57	.00	.00	-704.32	.00
		Max M-3	.00	-9513.57	.00	.00	-704.32	.00
		Min M-3	.00	-9513.57	.00	.00	-704.32	.00
5	LG3	Max N	3.00	-17323.8	.00	.00	684.67	.00
		Min N	1.00	-17323.8	.00	.00	597.28	.00
		Max Q-2	.00	-17323.8	.00	.00	684.67	.00
		Min Q-2	.00	-17323.8	.00	.00	684.67	.00
		Max Q-3	.00	-17323.8	.00	.00	684.67	.00
		Min Q-3	1.00	-17323.8	.00	.00	597.28	.00
		Max M-2	.00	-17323.8	.00	.00	684.67	.00
		Min M-2	.00	-17323.8	.00	.00	684.67	.00
		Max M-3	.00	-17323.8	.00	.00	684.67	.00
		Min M-3	.00	-17323.8	.00	.00	684.67	.00
6	LG1	Max N	3.00	-9809.57	.00	.00	-562.44	.00
		Min N	3.00	-9809.57	.00	.00	-562.44	.00
		Max Q-2	.00	-9809.57	.00	.00	-562.44	.00
		Min Q-2	.00	-9809.57	.00	.00	-562.44	.00
		Max Q-3	3.00	-9809.57	.00	.00	-562.44	.00
		Min Q-3	.00	-9809.57	.00	.00	-562.44	.00
		Max M-2	.00	-9809.57	.00	.00	-562.44	.00
		Min M-2	.00	-9809.57	.00	.00	-562.44	.00
		Max M-3	.00	-9809.57	.00	.00	-562.44	.00
		Min M-3	.00	-9809.57	.00	.00	-562.44	.00
7	LG3	Max N	4.00	-17397.8	.00	.00	597.28	.00
		Min N	3.00	-17397.8	.00	.00	234.02	.00
		Max Q-2	.00	-17397.8	.00	.00	597.28	.00
		Min Q-2	.00	-17397.8	.00	.00	597.28	.00
		Max Q-3	.00	-17397.8	.00	.00	597.28	.00
		Min Q-3	3.00	-17397.8	.00	.00	234.02	.00
		Max M-2	.00	-17397.8	.00	.00	597.28	.00
		Min M-2	.00	-17397.8	.00	.00	597.28	.00
		Max M-3	.00	-17397.8	.00	.00	597.28	.00
		Min M-3	.00	-17397.8	.00	.00	597.28	.00



Projekt: Allgemein

Position: WIPIC-L40-Gittermast 18m

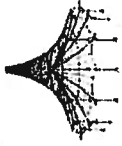
Gittermast abgesp. L180-Typ L40

Seite: 6

21.12.2000

SCHNITTGRÖSSEN STABBEZOGEN

Stab-Nr.	LFI/Gr-Nr.	Knoten-Nr.	x [m]	N	Kräfte [N]		T	Momente [Nm]	
					Q-2	Q-3		M-2	M-3
4	LG3	Max M2	3.00	-17619.8	.00	234.02	.00	-986.79	.00
		Min M2	.00	-17397.8	.00	597.28	.00	-2262.32	.00
		Max M3	.00	-17397.8	.00	597.28	.00	-2262.32	.00
		Min M3	.00	-17397.8	.00	597.28	.00	-2262.32	.00
5	LG1	5	.00	-9809.57	.00	-87.91	.00	371.81	.00
		6	2.00	-9857.56	.00	240.84	.00	526.13	.00
		Max N	.00	-9809.57	.00	-87.91	.00	371.81	.00
		Min N	2.00	-9857.56	.00	240.84	.00	526.13	.00
		Max Q-2	.00	-9809.57	.00	-87.91	.00	371.81	.00
		Min Q-2	.00	-9809.57	.00	-87.91	.00	371.81	.00
		Max Q-3	2.00	-9857.56	.00	240.84	.00	526.13	.00
		Min Q-3	.00	-9809.57	.00	-87.91	.00	371.81	.00
		Max M2	2.00	-9857.56	.00	240.84	.00	526.13	.00
		Min M2	.50	-9846.56	.00	-5.29	.00	348.65	.00
		Max M3	.00	-9809.57	.00	-87.91	.00	371.81	.00
		Min M3	.00	-9809.57	.00	-87.91	.00	371.81	.00
6	LG1	5	.00	-17619.8	.00	234.02	.00	-986.79	.00
		6	2.00	-17767.8	.00	-52.67	.00	-804.13	.00
		Max N	.00	-17619.8	.00	234.02	.00	-986.79	.00
		Min N	2.00	-17767.8	.00	-52.67	.00	-804.13	.00
		Max Q-2	.00	-17619.8	.00	234.02	.00	-986.79	.00
		Min Q-2	.00	-17619.8	.00	234.02	.00	-986.79	.00
		Max Q-3	.00	-17619.8	.00	234.02	.00	-986.79	.00
		Min Q-3	.00	-17619.8	.00	234.02	.00	-986.79	.00
		Max M2	2.00	-17767.8	.00	-52.67	.00	-804.13	.00
		Min M2	1.60	-17738.2	.00	5.37	.00	-794.66	.00
		Max M3	.00	-17619.8	.00	234.02	.00	-986.79	.00
		Min M3	.00	-17619.8	.00	234.02	.00	-986.79	.00
7	LG1	6	.00	-10567.6	.00	-534.20	.00	526.13	.00
		7	1.00	-10641.6	.00	-368.26	.00	73.92	.00
		Max N	.00	-10567.6	.00	-534.20	.00	526.13	.00
		Min N	1.00	-10641.6	.00	-368.26	.00	73.92	.00
		Max Q-2	.00	-10567.6	.00	-534.20	.00	526.13	.00
		Min Q-2	.00	-10567.6	.00	-534.20	.00	526.13	.00
		Max Q-3	1.00	-10641.6	.00	-368.26	.00	73.92	.00
		Min Q-3	.00	-10567.6	.00	-534.20	.00	526.13	.00
		Max M2	.00	-10567.6	.00	-534.20	.00	526.13	.00
		Min M2	1.00	-10641.6	.00	-368.26	.00	73.92	.00
		Max M3	.00	-10567.6	.00	-534.20	.00	526.13	.00
		Min M3	.00	-10567.6	.00	-534.20	.00	526.13	.00
8	LG1	6	.00	-18714.9	.00	546.11	.00	-804.13	.00
		7	1.00	-18788.9	.00	394.15	.00	-332.23	.00
		Max N	.00	-18714.9	.00	546.11	.00	-804.13	.00
		Min N	1.00	-18788.9	.00	394.15	.00	-332.23	.00
		Max Q-2	.00	-18714.9	.00	546.11	.00	-804.13	.00
		Min Q-2	.00	-18714.9	.00	546.11	.00	-804.13	.00
		Max Q-3	.00	-18714.9	.00	546.11	.00	-804.13	.00
		Min Q-3	.00	-18714.9	.00	546.11	.00	-804.13	.00
		Max M2	1.00	-18788.9	.00	394.15	.00	-332.23	.00
		Min M2	.00	-18714.9	.00	546.11	.00	-804.13	.00
		Max M3	.00	-18714.9	.00	546.11	.00	-804.13	.00
		Min M3	.00	-18714.9	.00	546.11	.00	-804.13	.00
9	LG1	7	.00	-10641.6	.00	-368.26	.00	73.92	.00
		8	3.00	-10653.6	.00	-160.50	.00	-242.78	.00
		Max N	.00	-10641.6	.00	-368.26	.00	73.92	.00
		Min N	3.00	-10653.6	.00	-160.50	.00	-242.78	.00
		Max Q-2	.00	-10641.6	.00	-368.26	.00	73.92	.00
		Min Q-2	.00	-10641.6	.00	-368.26	.00	73.92	.00
		Max Q-3	.00	-10641.6	.00	-368.26	.00	73.92	.00
		Min Q-3	.00	-10641.6	.00	-368.26	.00	73.92	.00
		Max M2	.00	-10641.6	.00	-368.26	.00	73.92	.00
		Min M2	2.10	-10797.0	.00	38	.00	-315.28	.00
		Max M3	.00	-10641.6	.00	-368.26	.00	73.92	.00
		Min M3	.00	-10641.6	.00	-368.26	.00	73.92	.00
10	LG3	7	.00	-18788.9	.00	394.15	.00	-332.23	.00
		8	3.00	-19010.9	.00	-122.22	.00	86.93	.00
		Max N	.00	-18788.9	.00	394.15	.00	-332.23	.00
		Min N	3.00	-19010.9	.00	-122.22	.00	86.93	.00
		Max Q-2	.00	-18788.9	.00	394.15	.00	-332.23	.00
		Min Q-2	.00	-18788.9	.00	394.15	.00	-332.23	.00
		Max Q-3	.00	-18788.9	.00	394.15	.00	-332.23	.00
		Min Q-3	.00	-18788.9	.00	394.15	.00	-332.23	.00
		Max M2	3.00	-19010.9	.00	-122.22	.00	86.93	.00
		Min M2	2.25	-18955.4	.00	9.99	.00	-332.23	.00
		Max M3	.00	-18788.9	.00	394.15	.00	-332.23	.00
		Min M3	.00	-18788.9	.00	394.15	.00	-332.23	.00



Projekt: Allgemein

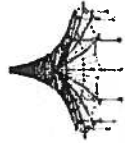
Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

Seite: 7

21.12.2000

SCHNITTGRÖSSEN STABBEZOGEN

Stab-Nr.	LF/LG-Nr.	Knoten-Nr.	x [m]	N	Kräfte [N] Q-2	Q-3	T	Momente [Nm] M-2	M-3
8	LG1	8	.00	-10863.6	.00	180.50	.00	-242.78	.00
		9	3.00	-11085.6	.00	659.57	.00	1008.52	.00
		Max N	.00	-10863.6	.00	180.50	.00	-242.78	.00
		Min N	3.00	-11085.6	.00	659.57	.00	1008.52	.00
		Max Q-2	.00	-10863.6	.00	180.50	.00	-242.78	.00
		Min Q-2	.00	-10863.6	.00	180.50	.00	-242.78	.00
		Max Q-3	3.00	-11085.6	.00	659.57	.00	1008.52	.00
		Min Q-3	.00	-10863.6	.00	180.50	.00	-242.78	.00
		Max M-2	.00	-10863.6	.00	180.50	.00	-242.78	.00
		Min M-2	3.00	-11085.6	.00	659.57	.00	1008.52	.00
		Max M-3	.00	-10863.6	.00	180.50	.00	-242.78	.00
		Min M-3	.00	-10863.6	.00	180.50	.00	-242.78	.00
		8	.00	-19010.9	.00	-122.22	.00	86.93	.00
		9	3.00	-19232.9	.00	-599.09	.00	-1027.76	.00
9	LG1	Max N	.00	-19010.9	.00	-122.22	.00	86.93	.00
		Min N	3.00	-19232.9	.00	-599.09	.00	-1027.76	.00
		Max Q-2	.00	-19010.9	.00	-122.22	.00	86.93	.00
		Min Q-2	.00	-19010.9	.00	-122.22	.00	86.93	.00
		Max Q-3	3.00	-19232.9	.00	-599.09	.00	-1027.76	.00
		Min Q-3	.00	-19010.9	.00	-122.22	.00	86.93	.00
		Max M-2	.00	-19010.9	.00	-122.22	.00	86.93	.00
		Min M-2	3.00	-19232.9	.00	-599.09	.00	-1027.76	.00
		Max M-3	.00	-19010.9	.00	-122.22	.00	86.93	.00
		Min M-3	.00	-19010.9	.00	-122.22	.00	86.93	.00
		1	.00	6218.79	.00	.00	.00	.00	.00
		10	20.59	6218.79	.00	.00	.00	.00	.00
		Max N	.00	6218.79	.00	.00	.00	.00	.00
		Min N	.00	6218.79	.00	.00	.00	.00	.00
10	LG3	Max Q-2	.00	6218.79	.00	.00	.00	.00	.00
		Min Q-2	.00	6218.79	.00	.00	.00	.00	.00
		Max Q-3	.00	6218.79	.00	.00	.00	.00	.00
		Min Q-3	.00	6218.79	.00	.00	.00	.00	.00
		Druck -> Ausfall	.00	6218.79	.00	.00	.00	.00	.00
		Druck -> Ausfall	.00	6218.79	.00	.00	.00	.00	.00
		1	.00	6155.57	.00	.00	.00	.00	.00
		11	20.59	6155.57	.00	.00	.00	.00	.00
		Max N	.00	6155.57	.00	.00	.00	.00	.00
		Min N	.00	6155.57	.00	.00	.00	.00	.00
		Max Q-2	.00	6155.57	.00	.00	.00	.00	.00
		Min Q-2	.00	6155.57	.00	.00	.00	.00	.00
		Max Q-3	.00	6155.57	.00	.00	.00	.00	.00
		Min Q-3	.00	6155.57	.00	.00	.00	.00	.00
11	LG1	Druck -> Ausfall	.00	6155.57	.00	.00	.00	.00	.00
		Druck -> Ausfall	.00	6155.57	.00	.00	.00	.00	.00
		1	.00	6155.57	.00	.00	.00	.00	.00
		12	20.59	6155.57	.00	.00	.00	.00	.00
		Max N	.00	6155.57	.00	.00	.00	.00	.00
		Min N	.00	6155.57	.00	.00	.00	.00	.00
		Max Q-2	.00	6155.57	.00	.00	.00	.00	.00
		Min Q-2	.00	6155.57	.00	.00	.00	.00	.00
		Max Q-3	.00	6155.57	.00	.00	.00	.00	.00
		Min Q-3	.00	6155.57	.00	.00	.00	.00	.00
		Druck -> Ausfall	.00	6155.57	.00	.00	.00	.00	.00
		Druck -> Ausfall	.00	6155.57	.00	.00	.00	.00	.00
		1	.00	6155.57	.00	.00	.00	.00	.00
		12	20.59	6155.57	.00	.00	.00	.00	.00
12	LG1	Max N	.00	6155.57	.00	.00	.00	.00	.00
		Min N	.00	6155.57	.00	.00	.00	.00	.00
		Max Q-2	.00	6155.57	.00	.00	.00	.00	.00
		Min Q-2	.00	6155.57	.00	.00	.00	.00	.00
		Max Q-3	.00	6155.57	.00	.00	.00	.00	.00
		Min Q-3	.00	6155.57	.00	.00	.00	.00	.00
		Druck -> Ausfall	.00	6155.57	.00	.00	.00	.00	.00
		Druck -> Ausfall	.00	6155.57	.00	.00	.00	.00	.00
		3	.00	2659.91	.00	.00	.00	.00	.00
		10	16.40	2659.91	.00	.00	.00	.00	.00
		Max N	.00	2659.91	.00	.00	.00	.00	.00
		Min N	.00	2659.91	.00	.00	.00	.00	.00
		Max Q-2	.00	2659.91	.00	.00	.00	.00	.00
		Min Q-2	.00	2659.91	.00	.00	.00	.00	.00
13	LG3	Max Q-3	.00	2659.91	.00	.00	.00	.00	.00
		Min Q-3	.00	2659.91	.00	.00	.00	.00	.00
		Druck -> Ausfall	.00	2659.91	.00	.00	.00	.00	.00
		Druck -> Ausfall	.00	2659.91	.00	.00	.00	.00	.00
		3	.00	2908.90	.00	.00	.00	.00	.00
		11	16.40	2908.90	.00	.00	.00	.00	.00
		Max N	.00	2908.90	.00	.00	.00	.00	.00
		Min N	.00	2908.90	.00	.00	.00	.00	.00
		Max Q-2	.00	2908.90	.00	.00	.00	.00	.00
		Min Q-2	.00	2908.90	.00	.00	.00	.00	.00
		Max Q-3	.00	2908.90	.00	.00	.00	.00	.00
		Min Q-3	.00	2908.90	.00	.00	.00	.00	.00
		Druck -> Ausfall	.00	2908.90	.00	.00	.00	.00	.00
		Druck -> Ausfall	.00	2908.90	.00	.00	.00	.00	.00
14	LG1	3	.00	2908.90	.00	.00	.00	.00	.00
		12	16.40	2908.90	.00	.00	.00	.00	.00
		Max N	.00	2908.90	.00	.00	.00	.00	.00
		Min N	.00	2908.90	.00	.00	.00	.00	.00
		Max Q-2	.00	2908.90	.00	.00	.00	.00	.00
		Min Q-2	.00	2908.90	.00	.00	.00	.00	.00
		Max Q-3	.00	2908.90	.00	.00	.00	.00	.00
		Min Q-3	.00	2908.90	.00	.00	.00	.00	.00
		Druck -> Ausfall	.00	2908.90	.00	.00	.00	.00	.00
		Druck -> Ausfall	.00	2908.90	.00	.00	.00	.00	.00
		3	.00	2908.90	.00	.00	.00	.00	.00
		12	16.40	2908.90	.00	.00	.00	.00	.00
		Max N	.00	2908.90	.00	.00	.00	.00	.00
		Min N	.00	2908.90	.00	.00	.00	.00	.00



Projekt: Allgemein

Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

Seite: 8

21.12.2000

SCHNITTGRÖSSEN STABBEZOGEN

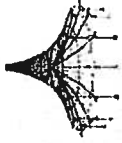
Stab-Nr.	LFLG-Nr.	Knoten-Nr.	x [m]	Kräfte [N]		T	Momente [Nm]	
				N	Q-2		Q-3	M-2 M-3
12	LG3	Max Q-3 Min Q-3	.00 .00	2908.90 2908.90	.00 .00	.00 .00	.00 .00	
15	LG1	6 Max N Min N Max Q-2 Min Q-2 Max Q-3 Min Q-3	12.21 .00 .00 .00 .00 .00 .00	1015.56 1015.56 1015.56 1015.56 1015.56 1015.56	.00 .00 .00 .00 .00 .00	.00 .00 .00 .00 .00 .00	.00 .00 .00 .00 .00 .00	
16	LG3	Druck -> Ausfall Druck -> Ausfall	.00 .00	801.86 801.86	.00 .00	.00 .00	.00 .00	
17	LG1	6 Max N Min N Max Q-2 Min Q-2 Max Q-3 Min Q-3	12.21 .00 .00 .00 .00 .00 .00	801.86 801.86 801.86 801.86 801.86 801.86	.00 .00 .00 .00 .00 .00	.00 .00 .00 .00 .00 .00	.00 .00 .00 .00 .00 .00	

AUFLAGERKRÄFTE UND -MOMENTE

Knoten-Nr.	LFLG-Nr.	P-X	Auflagerkräfte [N]		P-Z	Auflagermomente [Nm]	
			F-Y	F-Z		M-X M-Y	M-Z
9	LG1	659.573	.000	11085.620	.000	-1008.517	.000
10	LG1	-599.089	.000	19232.900	.000	1027.757	.000
11	LG1	5501.288	.000	-8073.032	.000	.000	.000
12	LG1	.000	.000	37.656	.000	.000	.000
13	LG1	.000	.000	37.655	.000	.000	.000
14	LG1	-2780.886	4686.046	-8091.332	.000	.000	.000
15	LG1	.000	.000	37.655	.000	.000	.000
16	LG1	-2780.886	-4686.046	-8091.332	.000	.000	.000
17	LG1	6160.860	.000	3087.897	.000	.000	.000
18	LG1	6160.861	.000	3087.897	.000	.000	.000
19	LG1	-6160.860	.000	3087.896	.000	.000	.000
20	LG1	-6160.861	.000	3087.897	.000	.000	.000

Globale Knotenverformungen

Knoten-Nr.	LFLG-Nr.	u-X	Verschiebungen [mm]		u-Z	Verdrehungen [mrad]	
			u-Y	u-Z		φ-X φ-Y	φ-Z
1	LG1	1.023E+02	.00000	3.39436	.00000	-16.03880	.00000
2	LG1	-2.087E+02	.00000	5.99709	.00000	31.00352	.00000
3	LG1	55.05950	.00000	2.96871	.00000	-14.74130	.00000
4	LG1	-1.183E+02	.00000	5.25353	.00000	27.93580	.00000
5	LG1	28.65865	.00000	2.67757	.00000	-9.76977	.00000
6	LG1	-69.22484	.00000	4.75045	.00000	20.02672	.00000
7	LG1	21.61670	.00000	2.48702	.00000	-6.58221	.00000
8	LG1	-51.80021	.00000	4.40408	.00000	15.09417	.00000
9	LG1	9.77991	.00000	1.90649	.00000	-2.29127	.00000
10	LG1	-21.84138	.00000	3.35905	.00000	6.28281	.00000
11	LG1	6.80001	.00000	1.51210	.00000	-7.6203	.00000
12	LG1	-12.44774	.00000	2.64989	.00000	3.03701	.00000
13	LG1	6.18749	.00000	1.30051	.00000	-23412	.00000
14	LG1	-10.04224	.00000	2.27585	.00000	1.97347	.00000
15	LG1	4.08789	.00000	.65880	.00000	-1.48057	.00000
16	LG1	-4.68798	.00000	1.14457	.00000	2.01393	.00000
17	LG1	.00000	.00000	.00000	.00000	.00000	.00000
18	LG1	.00000	.00000	.00000	.00000	.00000	.00000
19	LG1	.00000	.00000	.00000	.00000	.00000	.00000
20	LG1	.00000	.00000	.00000	.00000	.00000	.00000
21	LG1	.00000	.00000	.00000	.00000	.00000	.00000



Projekt: Allgemein

Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

Seite: 9

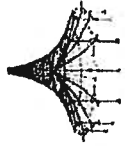
21.12.2000

Globale Knotenverformungen

Knoten- Nr.	LF/LG- Nr.	Verschiebungen [mm]			Verdrehungen [mrad]		
		u-X	u-Y	u-Z	φ -X	φ -Y	φ -Z
11	LG3	.00000	.00000	.00000	.00000	.00000	.00000
12	LG1	.00000	.00000	.00000	.00000	.00000	.00000
	LG3	.00000	.00000	.00000	.00000	.00000	.00000
Maxi	LG1	1.023E+02	.00000	3.39436	.00000	.00000	.00000
Mini	LG1	.00000	.00000	.00000	.00000	.00000	.00000
Maxi	LG3	.00000	.00000	5.99709	.00000	-16.03890	.00000
Mini	LG3	-2.087E+02	.00000	.00000	.00000	31.00352	.00000

MAX/MIN/ZUGGEH-SCHNITTGRÖSSEN STABBEZOGEN

Stab- Nr.	LK- Nr.	x [m]	N	Kräfte [N]		T	Momente [Nm]	
				Q-1	Q-2		M-1	M-2
1	LK1	.00	max	-1051.52	.00	.00	.00	.00
			min	-4571.60	.00	-29.04	.00	.00
			LFs in Max	LF1				
			LFs in Min	LF1				
			max	-1051.52	.00	.00	.00	.00
			min	-1051.52	.00	.00	.00	.00
			LFs in Max	LF1				
			LFs in Min	LF1				
			max	-1051.52	.00	.00	.00	.00
			min	-4571.60	.00	-29.04	.00	.00
			LFs in Max	LF1				
			LFs in Min	LF1				
			max	-1051.52	.00	.00	.00	.00
			min	-1051.52	.00	.00	.00	.00
			LFs in Max	LF1				
			LFs in Min	LF1				
		3.00	max	-1199.52	.00	.00	.00	.00
			min	-4719.60	.00	314.40	.00	428.05
			LFs in Max	LF1				
			LFs in Min	LF1				
			max	-1199.52	.00	.00	.00	.00
			min	-1199.52	.00	.00	.00	.00
			LFs in Max	LF1				
			LFs in Min	LF1				
			max	-4719.60	.00	314.40	.00	428.05
			min	-1199.52	.00	.00	.00	.00
			LFs in Max	LF1				
			LFs in Min	LF1				
			max	-4719.60	.00	314.40	.00	428.05
			min	-1199.52	.00	.00	.00	.00
			LFs in Max	LF1				
			LFs in Min	LF1				
		.00	MAX	-1051.52	.00	.00	.00	.00
			MIN	-4719.60	.00	314.40	.00	428.05
			LFs in Max	LF1				
			LFs in Min	LF1				
			MAX	-1051.52	.00	.00	.00	.00
			MIN	-1051.52	.00	.00	.00	.00
			LFs in Max	LF1				
			LFs in Min	LF1				
			MAX	-4719.60	.00	314.40	.00	428.05
			MIN	-4571.60	.00	-29.04	.00	.00
			LFs in Max	LF1				
			LFs in Min	LF1				
			MAX	-4719.60	.00	314.40	.00	428.05
			MIN	-4586.40	.00	5.31	.00	-3.56
			LFs in Max	LF1				
			LFs in Min	LF1				
		.00	MAX	-1051.52	.00	.00	.00	.00
			MIN	-1051.52	.00	.00	.00	.00
			LFs in Max	LF1				
			LFs in Min	LF1				
			MAX	-1051.52	.00	.00	.00	.00
			MIN	-1051.52	.00	.00	.00	.00
			LFs in Max	LF1				
			LFs in Min	LF1				
			MAX	-1051.52	.00	.00	.00	.00
			MIN	-1051.52	.00	.00	.00	.00
			LFs in Max	LF1				
			LFs in Min	LF1				
			MAX	-1051.52	.00	.00	.00	.00
			MIN	-7823.32	.00	-11.41	.00	.00
			LFs in Max	LF1				
			LFs in Min	LF1				



Projekt: Allgemein

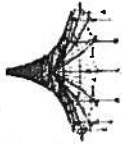
Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

Seite: 10

21.12.2000

MAX/MIN/ZUGGEH-SCHNITTGRÖSSEN STABBEZOGEN

Stab-Nr.	LK-Nr.	x [m]	N	Kräfte [N]		Q-3	T	Momente [Nm]		M-3
				Q-2	M-2					
1			3.00	LF ₆ in Max LF ₁ LF ₈						
				max	-1051.52	.00	.00	.00	.00	.00
				min	-1051.52	.00	.00	.00	.00	.00
				LF ₆ in Max LF ₁						
				LF ₆ in Min: LF ₁						
				max	-1051.52	.00	.00	.00	.00	.00
				min	-7823.32	.00	-11.41	.00	.00	.00
				LF ₆ in Max LF ₁ LF ₈						
				max	-1051.52	.00	.00	.00	.00	.00
				min	-1051.52	.00	.00	.00	.00	.00
				LF ₆ in Max LF ₁						
				LF ₆ in Min: LF ₁						
				max	-1051.52	.00	.00	.00	.00	.00
				min	-1051.52	.00	.00	.00	.00	.00
				LF ₆ in Max LF ₁ LF ₈						
				max	-1199.52	.00	.00	.00	.00	.00
min	-7971.31	.00	-416.41	.00	-641.74	.00				
			3.00	LF ₆ in Max LF ₁ LF ₈						
				max	-1199.52	.00	.00	.00	.00	.00
				min	-7971.31	.00	-416.41	.00	-641.74	.00
				LF ₆ in Max LF ₁						
				LF ₆ in Min: LF ₁ LF ₈						
				max	-1199.52	.00	.00	.00	.00	.00
				min	-1199.52	.00	.00	.00	.00	.00
				LF ₆ in Max LF ₁						
				LF ₆ in Min: LF ₁						
				max	-1199.52	.00	.00	.00	.00	.00
				min	-1199.52	.00	.00	.00	.00	.00
				LF ₆ in Max LF ₁ LF ₈						
				max	-1051.52	.00	.00	.00	.00	.00
				min	-7971.31	.00	-416.41	.00	-641.74	.00
				LF ₆ in Max LF ₁						
				LF ₆ in Min: LF ₁ LF ₈						
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				
min	-7971.31	.00	-416.41	.00	-641.74	.00				
LF ₆ in Max LF ₁										
LF ₆ in Min: LF ₁										
max	-1051.52	.00	.00	.00	.00	.00				
min	-1051.52	.00	.00	.00	.00	.00				
LF ₆ in Max LF ₁ LF ₈										
max	-1199.52	.00	.00	.00	.00	.00				



Projekt: Allgemein

Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

Seite: 11

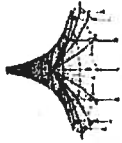
21.12.2000

ERGEBNISSE

MAX/MIN/ZUGGEH-SCHNITTGRÖSSEN STABBEZOGEN

www.minuzugestrichnit.karlsruhe.de

Stab-Nr.	Lk-Nr.	x [m]	N	Kräfte [N]		T	Momente [Nm]		M-3
				Q-2	Q-3		M-2		
2		2.00	LF ₆ in Max: LF ₁	max	-1298.18	.00	.00	.00	.00
			LF ₆ in Min: LF ₁	min	-4818.26	.00	.00	.00	1285.81
			LF ₆ in Max: LF ₁	max	-1298.18	.00	.00	.00	.00
			LF ₆ in Min: LF ₁	min	-1298.18	.00	.00	.00	.00
			LF ₆ in Max: LF ₁	max	-4818.26	.00	.00	.00	1285.81
			LF ₆ in Min: LF ₁	min	-1298.18	.00	.00	.00	.00
			LF ₆ in Max: LF ₁	max	-4818.26	.00	.00	.00	1285.81
			LF ₆ in Min: LF ₁	min	-1298.18	.00	.00	.00	.00
		2.00	MAX	-1199.52	.00	.00	.00	.00	.00
			MIN	-4818.26	.00	.00	.00	.00	1285.81
			LF ₆ in Max: LF ₁	max	-1199.52	.00	.00	.00	.00
			LF ₆ in Min: LF ₁	min	-1199.52	.00	.00	.00	.00
			MAX	-4818.26	.00	.00	.00	.00	1285.81
			MIN	-1199.52	.00	.00	.00	.00	.00
			LF ₆ in Max: LF ₁	max	-1199.52	.00	.00	.00	.00
			LF ₆ in Min: LF ₁	min	-1199.52	.00	.00	.00	.00
LK3	.00	MAX	-1199.52	.00	.00	.00	.00	.00	
		MIN	-7971.31	.00	.00	.00	-641.74		
		LF ₆ in Max: LF ₁	max	-1199.52	.00	.00	.00	.00	
		LF ₆ in Min: LF ₁	min	-1199.52	.00	.00	.00	.00	
		MAX	-1199.52	.00	.00	.00	.00	.00	
		MIN	-7971.31	.00	.00	.00	-641.74		
		LF ₆ in Max: LF ₁	max	-1199.52	.00	.00	.00	.00	
		LF ₆ in Min: LF ₁	min	-1199.52	.00	.00	.00	.00	
2.00		MAX	-1298.18	.00	.00	.00	.00	.00	
		MIN	-8069.98	.00	.00	.00	-1744.56		
		LF ₆ in Max: LF ₁	max	-1298.18	.00	.00	.00	.00	
		LF ₆ in Min: LF ₁	min	-1298.18	.00	.00	.00	.00	
		MAX	-1298.18	.00	.00	.00	.00	.00	
		MIN	-8069.98	.00	.00	.00	-1744.56		
		LF ₆ in Max: LF ₁	max	-1298.18	.00	.00	.00	.00	
		LF ₆ in Min: LF ₁	min	-8069.98	.00	.00	.00	-1744.56	



Projekt: Allgemein

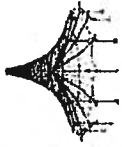
Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

Seite: 12

21.12.2000

MAX/MINZUGEH-SCHNITTGRÖSSEN STABBEZOGEN

Stab-Nr.	Lk-Nr.	x [m]	Kräfte [N]		Momente [Nm]		
			N	Q-2	T	M-2	M-3
2			LF _e in Max: LF ₁ LF ₆				
			LF _e in Min: LF ₁ LF ₆				
			max	-1298.18	.00	.00	.00
			min	-1298.18	.00	.00	.00
			LF _e in Max: LF ₁				
			LF _e in Min: LF ₁				
			MAX	-1199.52	.00	.00	.00
			MIN	-8069.98	.00	.00	.00
			LF _e in Max: LF ₁ LF ₆				
			LF _e in Min: LF ₁ LF ₆				
3	LK1		MAX	-1199.52	.00	.00	.00
			MIN	-8069.98	.00	.00	.00
			LF _e in Max: LF ₁				
			LF _e in Min: LF ₁ LF ₆				
			MAX	-1298.18	.00	.00	.00
			MIN	-8069.98	.00	.00	.00
			LF _e in Max: LF ₁				
			LF _e in Min: LF ₁ LF ₆				
			MAX	-1199.52	.00	.00	.00
			MIN	-8069.98	.00	.00	.00
			LF _e in Max: LF ₁				
			LF _e in Min: LF ₁ LF ₆				
			MAX	-1298.18	.00	.00	.00
			MIN	-8069.98	.00	.00	.00
			LF _e in Max: LF ₁				
			LF _e in Min: LF ₁ LF ₆				
			MAX	-1199.52	.00	.00	.00
			MIN	-8069.98	.00	.00	.00
			LF _e in Max: LF ₁				
			LF _e in Min: LF ₁ LF ₆				
			max	-1323.29	.00	.00	.00
			min	-6282.80	.00	.00	.00
			LF _e in Max: LF ₁				
			LF _e in Min: LF ₁ LF ₅				
			max	-1323.29	.00	.00	.00
			min	-1323.29	.00	.00	.00
			LF _e in Max: LF ₁				
			LF _e in Min: LF ₁				
			max	-1323.29	.00	.00	.00
			min	-6282.80	.00	.00	.00
			max	-6282.80	.00	.00	.00
			min	-1323.29	.00	.00	.00
			LF _e in Max: LF ₁ LF ₅				
			LF _e in Min: LF ₁				
			max	-1323.29	.00	.00	.00
			min	-1323.29	.00	.00	.00
			LF _e in Max: LF ₁				
			LF _e in Min: LF ₁				
			max	-1372.62	.00	.00	.00
			min	-6332.13	.00	.00	.00
			max	-1372.62	.00	.00	.00
			min	-1372.62	.00	.00	.00
			LF _e in Max: LF ₁				
			LF _e in Min: LF ₁				
			max	-1372.62	.00	.00	.00
			min	-6332.13	.00	.00	.00
			LF _e in Max: LF ₁ LF ₅				
			LF _e in Min: LF ₁				
			max	-6332.13	.00	.00	.00
			min	-1372.62	.00	.00	.00
			max	-1372.62	.00	.00	.00
			min	-1372.62	.00	.00	.00
			LF _e in Max: LF ₁				
			LF _e in Min: LF ₁				
			MAX	-1323.29	.00	.00	.00
			MIN	-6332.13	.00	.00	.00
			LF _e in Max: LF ₁				
			LF _e in Min: LF ₁ LF ₅				
			MAX	-1323.29	.00	.00	.00
			MIN	-1323.29	.00	.00	.00
			MAX	-1323.29	.00	.00	.00
			MIN	-6282.80	.00	.00	.00



Letrona AG

Postfach, CH-9504 FRILTSCHE

Tel: 004171/6546464 - Fax: 004171/6546465

Projekt: Allgemein

Position: WIPIC-L40-Gittermast 18m

Gittermast abgesp. L180-Typ L40

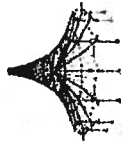
Seite: 13

21.12.2000

ERGEBNISSE

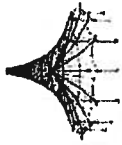
MAX/MIN/ZUGGEH-SCHNITTGRÖSSEN STABBEZOGEN

Stab-Nr.	Lk-Nr.	x [m]	N	Kräfte [N]		T	Momente [Nm]		M-3
				Q-2	Q-3		M-2	M-3	
3	LK3	.00	LFs in Max: LF1 LF5						
			LFs in Min: LF1 LF5						
			MAX	-6282.80	.00	-495.81	.00	1285.81	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF5						
			LFs in Min: LF1 LF5						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF5						
			LFs in Min: LF1 LF5						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
		1.00	LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-11550.5	.00	584.98	.00	-1744.56	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
		.00	LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-11550.5	.00	584.98	.00	-1744.56	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
		.00	LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-11550.5	.00	584.98	.00	-1744.56	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
	LK1	.00	LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-11550.5	.00	584.98	.00	-1744.56	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
		.00	LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-11550.5	.00	584.98	.00	-1744.56	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
		.00	LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-11550.5	.00	584.98	.00	-1744.56	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
		.00	LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-11550.5	.00	584.98	.00	-1744.56	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
		.00	LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-11550.5	.00	584.98	.00	-1744.56	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
		.00	LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-11550.5	.00	584.98	.00	-1744.56	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
		.00	LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-11550.5	.00	584.98	.00	-1744.56	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
		.00	LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-11550.5	.00	584.98	.00	-1744.56	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
		.00	LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-11550.5	.00	584.98	.00	-1744.56	.00
			MIN	-1323.29	.00	.00	.00	.00	.00
			LFs in Max: LF1 LF6						
			LFs in Min: LF1 LF6						
			MAX	-1323.29	.00	.00	.00	.00	.00
			MIN	-1323.29	.00	.00	.00	.00	.00



MAX/MIN/ZUGGEH-SCHNITTGRÖSSEN STABBEZUGEN

Stab-Nr.	LK-Nr.	x [m]	N	Kräfte [N] Q-2	Q-3	T	Momente [Nm] M-2	M-3
4	LK3	3.00	LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1372.62	.00	.00	.00	.00
			min	-6332.13	.00	.00	847.24	.00
			LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-6332.13	.00	.00	847.24	.00
			min	-1372.62	.00	.00	.00	.00
			LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1372.62	.00	.00	.00	.00
			min	-1372.62	.00	.00	.00	.00
			LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1520.61	.00	.00	.00	.00
			min	-6480.12	.00	.00	218.41	.00
			LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1520.61	.00	.00	.00	.00
			min	-1520.61	.00	.00	.00	.00
			LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1520.61	.00	.00	.00	.00
			min	-6480.12	.00	.00	218.41	.00
	LK3	3.00	LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1372.62	.00	.00	.00	.00
			min	-6480.12	.00	.00	218.41	.00
			LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1372.62	.00	.00	.00	.00
			min	-6480.12	.00	.00	218.41	.00
			LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1372.62	.00	.00	.00	.00
			min	-6480.12	.00	.00	218.41	.00
			LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1372.62	.00	.00	.00	.00
			min	-6480.12	.00	.00	218.41	.00
			LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1372.62	.00	.00	.00	.00
			min	-6480.12	.00	.00	218.41	.00
			LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1372.62	.00	.00	.00	.00
			min	-6480.12	.00	.00	218.41	.00
	LK3	3.00	LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1372.62	.00	.00	.00	.00
			min	-6480.12	.00	.00	218.41	.00
			LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1372.62	.00	.00	.00	.00
			min	-6480.12	.00	.00	218.41	.00
			LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1372.62	.00	.00	.00	.00
			min	-6480.12	.00	.00	218.41	.00
			LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1372.62	.00	.00	.00	.00
			min	-6480.12	.00	.00	218.41	.00
			LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1372.62	.00	.00	.00	.00
			min	-6480.12	.00	.00	218.41	.00
			LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1372.62	.00	.00	.00	.00
			min	-6480.12	.00	.00	218.41	.00
	LK3	3.00	LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1372.62	.00	.00	.00	.00
			min	-6480.12	.00	.00	218.41	.00
			LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1372.62	.00	.00	.00	.00
			min	-6480.12	.00	.00	218.41	.00
			LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1372.62	.00	.00	.00	.00
			min	-6480.12	.00	.00	218.41	.00
			LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1372.62	.00	.00	.00	.00
			min	-6480.12	.00	.00	218.41	.00
			LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1372.62	.00	.00	.00	.00
			min	-6480.12	.00	.00	218.41	.00
			LF ₆ in Max: LF ₁ LF ₆ in Min: LF ₁					
			max	-1372.62	.00	.00	.00	.00
			min	-6480.12	.00	.00	218.41	.00



Letrona AG

Postfach, CH-9504 FRILTSCHEN

Tel: 0041(7)16546464 - Fax: 0041(7)16546465

Projekt: Allgemein

Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

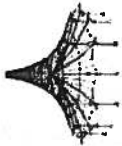
Seite: 15

21.12.2000

ERGEBNISSE

MAX/MIN/ZUGGEH-SCHNITTGRÖSSEN STABBEZOGEN

Stab-Nr.	LK-Nr.	x [m]	Kräfte [N]		T	Momente [Nm]		M-3
			N	Q-2		Q-3	M-2	
4			LF _e in Max: LF ₁ LF ₆					
			LF _e in Min: LF ₁ LF ₆					
			max	-1520.61		.00	.00	.00
			min	-1520.61		.00	.00	.00
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			max	-11747.8		44.98	-484.64	.00
			min	-1520.61		.00	.00	.00
			LF _e in Max: LF ₁ LF ₆					
			LF _e in Min: LF ₁					
			max	-1520.61		44.98	.00	.00
			min	-11747.8		.00	-484.64	.00
			LF _e in Max: LF ₁ LF ₆					
			LF _e in Min: LF ₁ LF ₆					
			max	-1520.61		.00	.00	.00
			min	-1520.61		.00	.00	.00
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			max	-1372.62		.00	.00	.00
			min	-11747.8		44.98	-484.64	.00
			LF _e in Max: LF ₁ LF ₆					
			LF _e in Min: LF ₁ LF ₆					
			max	-1372.62		.00	.00	.00
			min	-1372.62		.00	.00	.00
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			max	-11599.8		44.98	-1227.08	.00
			min	-1372.62		.00	.00	.00
			LF _e in Max: LF ₁ LF ₆					
			LF _e in Min: LF ₁ LF ₆					
			max	-1520.61		.00	.00	.00
			min	-11599.8		44.98	-1227.08	.00
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			max	-1372.62		.00	.00	.00
			min	-1372.62		.00	.00	.00
5	LK1		LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			max	-1520.61		.00	.00	.00
			min	-6480.12		-37.89	218.41	.00
			LF _e in Max: LF ₁ LF ₅					
			LF _e in Min: LF ₁ LF ₅					
			max	-1520.61		.00	.00	.00
			min	-1520.61		.00	.00	.00
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			max	-1520.61		.00	.00	.00
			min	-6480.12		-37.89	218.41	.00
			LF _e in Max: LF ₁ LF ₅					
			LF _e in Min: LF ₁ LF ₅					
			max	-1520.61		.00	.00	.00
			min	-1520.61		.00	.00	.00
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			max	-1619.28		.00	.00	.00
			min	-6578.79		191.07	371.59	.00
			LF _e in Max: LF ₁ LF ₅					
			LF _e in Min: LF ₁ LF ₅					
			max	-1619.28		.00	.00	.00
			min	-1619.28		.00	.00	.00
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			max	-6578.79		191.07	371.59	.00
			min	-1619.28		.00	.00	.00
			LF _e in Max: LF ₁ LF ₅					
			LF _e in Min: LF ₁ LF ₅					
			max	-1619.28		.00	.00	.00
			min	-1619.28		.00	.00	.00
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			max	-1619.28		.00	.00	.00
			min	-1619.28		.00	.00	.00



Projekt: Allgemein

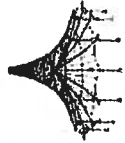
Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

Seite: 16

21.12.2000

MAX/MINZUGGEH-SCHNITTGRÖSSEN STABBEZOGEN

Stab-Nr.	Lk-Nr.	x [m]	N	Kräfte [N]		Q-3	T	Momente [Nm]	
				Q-2	M-2			M-3	
5	LK3	2.00	LF _e in Max LF _e in Min: LF1	max	-1520.61	.00	.00	.00	.00
				min	-6578.79	.00	191.07	.00	371.59
			LF _e in Max LF _e in Min: LF1 LF5	max	-1520.61	.00	.00	.00	.00
				min	-1520.61	.00	.00	.00	.00
			LF _e in Max LF _e in Min: LF1	max	-6578.79	.00	191.07	.00	371.59
				min	-6480.12	.00	-37.89	.00	218.41
		2.00	LF _e in Max LF _e in Min: LF1	max	-6578.79	.00	191.07	.00	371.59
				min	-1520.61	.00	.00	.00	.00
			LF _e in Max LF _e in Min: LF1 LF5	max	-1520.61	.00	.00	.00	.00
				min	-1520.61	.00	.00	.00	.00
			LF _e in Max LF _e in Min: LF1	max	-1520.61	.00	.00	.00	.00
				min	-1520.61	.00	.00	.00	.00
		2.00	LF _e in Max LF _e in Min: LF1 LF6	max	-1520.61	.00	.00	.00	.00
				min	-11747.8	.00	44.98	.00	-484.64
			LF _e in Max LF _e in Min: LF1	max	-1520.61	.00	.00	.00	.00
				min	-1520.61	.00	.00	.00	.00
			LF _e in Max LF _e in Min: LF1 LF6	max	-1520.61	.00	.00	.00	.00
				min	-11747.8	.00	44.98	.00	-484.64
2.00	LF _e in Max LF _e in Min: LF1	max	-1520.61	.00	.00	.00	.00		
		min	-1520.61	.00	.00	.00	.00		
	LF _e in Max LF _e in Min: LF1 LF6	max	-1619.28	.00	.00	.00	.00		
		min	-11846.5	.00	-225.02	.00	-664.68		
	LF _e in Max LF _e in Min: LF1	max	-1619.28	.00	.00	.00	.00		
		min	-1619.28	.00	.00	.00	.00		
2.00	LF _e in Max LF _e in Min: LF1 LF6	max	-1619.28	.00	.00	.00	.00		
		min	-11846.5	.00	-225.02	.00	-664.68		
	LF _e in Max LF _e in Min: LF1	max	-1619.28	.00	.00	.00	.00		
		min	-1619.28	.00	.00	.00	.00		
	LF _e in Max LF _e in Min: LF1 LF6	max	-1520.61	.00	.00	.00	.00		
		min	-11846.5	.00	-225.02	.00	-664.68		
2.00	LF _e in Max LF _e in Min: LF1	max	-1520.61	.00	.00	.00	.00		
		min	-1520.61	.00	.00	.00	.00		
	LF _e in Max LF _e in Min: LF1 LF6	max	-1520.61	.00	.00	.00	.00		
		min	-1520.61	.00	.00	.00	.00		
	LF _e in Max LF _e in Min: LF1	max	-1520.61	.00	.00	.00	.00		
		min	-1520.61	.00	.00	.00	.00		



Projekt: Allgemein

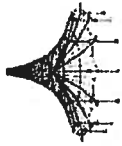
Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

Seite: 17

21.12.2000

MAX/MINZUGEH-SCHNITTGRÖSSEN STABBEZOGEN

Stab-Nr.	LK-Nr.	x [m]	Kräfte [N]		Q-3	T	Momente [Nm]		M-3
			N	Q-2			M-2		
5		.00 .00	LF ₁ in Max LF ₁ in Min: LF ₁ LF ₅						
			MAX -1520.61	.00	.00	.00	.00	.00	
			MIN -1520.61	.00	.00	.00	.00	.00	
			LF ₁ in Max LF ₁ in Min: LF ₁						
6	LK1	.00	max -1637.96	.00	.00	.00	.00	.00	
			min -7009.40	.00	.00	.00	.00	.00	
			LF ₁ in Max LF ₁ in Min: LF ₁ LF ₅						
			max -1637.96	.00	.00	.00	.00	.00	
			min -7009.40	.00	.00	.00	.00	.00	
			LF ₁ in Max LF ₁ in Min: LF ₁ LF ₅						
			max -1637.96	.00	.00	.00	.00	.00	
			min -7009.40	.00	.00	.00	.00	.00	
			LF ₁ in Max LF ₁ in Min: LF ₁ LF ₅						
			max -1637.96	.00	.00	.00	.00	.00	
			min -7009.40	.00	.00	.00	.00	.00	
			LF ₁ in Max LF ₁ in Min: LF ₁ LF ₅						
			max -1637.96	.00	.00	.00	.00	.00	
			min -7009.40	.00	.00	.00	.00	.00	
			LF ₁ in Max LF ₁ in Min: LF ₁ LF ₅						
					1.00	max -1687.30	.00	.00	.00
min -7058.73	.00	.00				.00	.00	.00	
LF ₁ in Max LF ₁ in Min: LF ₁ LF ₅									
max -1687.30	.00	.00				.00	.00	.00	
min -7058.73	.00	.00				.00	.00	.00	
LF ₁ in Max LF ₁ in Min: LF ₁ LF ₅									
max -1687.30	.00	.00				.00	.00	.00	
min -7058.73	.00	.00				.00	.00	.00	
LF ₁ in Max LF ₁ in Min: LF ₁ LF ₅									
max -1687.30	.00	.00				.00	.00	.00	
min -7058.73	.00	.00				.00	.00	.00	
LF ₁ in Max LF ₁ in Min: LF ₁ LF ₅									
max -1687.30	.00	.00				.00	.00	.00	
min -7058.73	.00	.00				.00	.00	.00	
LF ₁ in Max LF ₁ in Min: LF ₁ LF ₅									
		.00 1.00				MAX -1637.96	.00	.00	.00
			MIN -7058.73	.00	.00	.00	.00	.00	
			LF ₁ in Max LF ₁ in Min: LF ₁ LF ₅						
			MAX -1637.96	.00	.00	.00	.00	.00	
			MIN -1637.96	.00	.00	.00	.00	.00	
			LF ₁ in Max LF ₁ in Min: LF ₁						
			MAX -1637.96	.00	.00	.00	.00	.00	
			MIN -7009.40	.00	.00	.00	.00	.00	
			LF ₁ in Max LF ₁ in Min: LF ₁ LF ₅						
			MAX -1637.96	.00	.00	.00	.00	.00	
			MIN -7009.40	.00	.00	.00	.00	.00	
			LF ₁ in Max LF ₁ in Min: LF ₁ LF ₅						
			MAX -1637.96	.00	.00	.00	.00	.00	
			MIN -7009.40	.00	.00	.00	.00	.00	
			LF ₁ in Max LF ₁ in Min: LF ₁ LF ₅						
				LK3	.00	max -1637.96	.00	.00	.00
min -12852.3	.00	.00				.00	.00	.00	
LF ₁ in Max LF ₁ in Min: LF ₁ LF ₅									
max -1637.96	.00	.00				.00	.00	.00	
min -1637.96	.00	.00				.00	.00	.00	
LF ₁ in Max LF ₁ in Min: LF ₁									
max -1637.96	.00	.00				.00	.00	.00	
min -12852.3	.00	.00				.00	.00	.00	
LF ₁ in Max LF ₁ in Min: LF ₁ LF ₅									
max -1637.96	.00	.00				.00	.00	.00	
min -1637.96	.00	.00				.00	.00	.00	
LF ₁ in Max LF ₁ in Min: LF ₁									
max -1637.96	.00	.00				.00	.00	.00	
min -12852.3	.00	.00				.00	.00	.00	
LF ₁ in Max LF ₁ in Min: LF ₁ LF ₅									
max -1637.96	.00	.00				.00	.00	.00	



Projekt: Allgemein

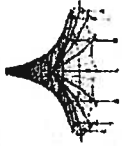
Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

Seite: 18

21.12.2000

MAX/MINZUGEH-SCHNITTGRÖSSEN STABBEZOGEN

Stab-Nr.	LK-Nr.	x [m]	N	Kräfte [N] Q-2	Q-3	T	Momente [Nm] M-2	M-3
6		1.00	LF _e in Max: LF ₁ LF ₈ LF _e in Min: LF ₁					
			max min	-1637.96 -12852.3	.00 443.94	.00	.00 -684.68	.00 .00
			LF _e in Max: LF ₁ LF _e in Min: LF ₁ LF ₆					
			max min	-1637.96 -1637.96	.00 .00	.00	.00 .00	.00 .00
			LF _e in Max: LF ₁ LF _e in Min: LF ₁					
			max min	-1687.30 -12901.7	.00 308.94	.00	.00 -288.23	.00 .00
			LF _e in Max: LF ₁ LF _e in Min: LF ₁ LF ₆					
			max min	-1687.30 -1687.30	.00 .00	.00	.00 .00	.00 .00
			LF _e in Max: LF ₁ LF _e in Min: LF ₁					
			max min	-12901.7 -1687.30	.00 308.94	.00	.00 -288.23	.00 .00
			LF _e in Max: LF ₁ LF ₈ LF _e in Min: LF ₁					
			max min	-1687.30 -12901.7	.00 308.94	.00	.00 -288.23	.00 .00
			LF _e in Max: LF ₁ LF _e in Min: LF ₁					
			max min	-1687.30 -1687.30	.00 .00	.00	.00 .00	.00 .00
			LF _e in Max: LF ₁ LF _e in Min: LF ₁					
7	LK1	.00	MAX MIN	-1637.96 -12901.7	.00 308.94	.00	.00 -288.23	.00 .00
			LF _e in Max: LF ₁ LF ₈ LF _e in Min: LF ₁ LF ₈					
			max min	-1637.96 -1637.96	.00 .00	.00	.00 .00	.00 .00
			LF _e in Max: LF ₁ LF _e in Min: LF ₁					
			max min	-12852.3 -1637.96	.00 443.94	.00	.00 -684.68	.00 .00
			LF _e in Max: LF ₁ LF ₆ LF _e in Min: LF ₁					
			max min	-1687.30 -12852.3	.00 443.94	.00	.00 -684.68	.00 .00
			LF _e in Max: LF ₁ LF _e in Min: LF ₁					
			max min	-1637.96 -1637.96	.00 .00	.00	.00 .00	.00 .00
			LF _e in Max: LF ₁ LF _e in Min: LF ₁					
			max min	-1687.30 -7058.73	.00 -245.41	.00	.00 68.94	.00 .00
			LF _e in Max: LF ₁ LF _e in Min: LF ₁ LF ₅					
			max min	-1687.30 -1687.30	.00 .00	.00	.00 .00	.00 .00
			LF _e in Max: LF ₁ LF _e in Min: LF ₁					
			max min	-1687.30 -7058.73	.00 -245.41	.00	.00 68.94	.00 .00
		3.00	max min	-7058.73 -1687.30	.00 .00	.00	.00 68.94	.00 .00
			LF _e in Max: LF ₁ LF ₅ LF _e in Min: LF ₁					
			max min	-1687.30 -1687.30	.00 .00	.00	.00 .00	.00 .00
		.00	max min	-1835.29 -7206.72	.00 98.03	.00	.00 -152.13	.00 .00
			LF _e in Max: LF ₁ LF _e in Min: LF ₁ LF ₅					
			max min	-1835.29 -1835.29	.00 .00	.00	.00 .00	.00 .00



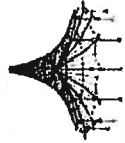
Projekt: Allgemein

Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

Seite: 19
21.12.2000

MAX/MINZUGEH-SCHNITTGRÖSSEN STABBEZOGEN

Stab-Nr.	Lk-Nr.	x [m]	N	Kraft [N]		Q-3	T	Momente [Nm]		M-3
				Q-2	M-2			M-2	M-3	
7			LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1	max	-7206.72	.00	98.03	.00	-152.13	.00
				min	-1835.29	.00	.00	.00	.00	.00
				max	-1835.29	.00	98.03	.00	.00	.00
				min	-7206.72	.00	.00	.00	-152.13	.00
				max	-1835.29	.00	.00	.00	.00	.00
				min	-1835.29	.00	.00	.00	.00	.00
				max	-1835.29	.00	.00	.00	.00	.00
				min	-1835.29	.00	.00	.00	.00	.00
				max	-1835.29	.00	.00	.00	.00	.00
				min	-1835.29	.00	.00	.00	.00	.00
				max	-1835.29	.00	.00	.00	.00	.00
				min	-1835.29	.00	.00	.00	.00	.00
				max	-1835.29	.00	.00	.00	.00	.00
				min	-1835.29	.00	.00	.00	.00	.00
				max	-1835.29	.00	.00	.00	.00	.00
				min	-1835.29	.00	.00	.00	.00	.00
				max	-1835.29	.00	.00	.00	.00	.00
				min	-1835.29	.00	.00	.00	.00	.00
				max	-1835.29	.00	.00	.00	.00	.00
				min	-1835.29	.00	.00	.00	.00	.00
LK3			LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1	max	-1687.30	.00	.00	.00	.00	.00
				min	-1687.30	.00	.00	.00	.00	.00
				max	-1687.30	.00	.00	.00	.00	.00
				min	-1687.30	.00	.00	.00	.00	.00
				max	-1687.30	.00	.00	.00	.00	.00
				min	-1687.30	.00	.00	.00	.00	.00
				max	-1687.30	.00	.00	.00	.00	.00
				min	-1687.30	.00	.00	.00	.00	.00
				max	-1687.30	.00	.00	.00	.00	.00
				min	-1687.30	.00	.00	.00	.00	.00
				max	-1687.30	.00	.00	.00	.00	.00
				min	-1687.30	.00	.00	.00	.00	.00
				max	-1687.30	.00	.00	.00	.00	.00
				min	-1687.30	.00	.00	.00	.00	.00
				max	-1687.30	.00	.00	.00	.00	.00
				min	-1687.30	.00	.00	.00	.00	.00
				max	-1687.30	.00	.00	.00	.00	.00
				min	-1687.30	.00	.00	.00	.00	.00
				max	-1687.30	.00	.00	.00	.00	.00
				min	-1687.30	.00	.00	.00	.00	.00
			LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1	max	-12901.7	.00	308.94	.00	-288.23	.00
				min	-12901.7	.00	.00	.00	.00	.00
				max	-12901.7	.00	308.94	.00	.00	.00
				min	-12901.7	.00	.00	.00	.00	.00
				max	-12901.7	.00	.00	.00	.00	.00
				min	-12901.7	.00	.00	.00	.00	.00
				max	-12901.7	.00	.00	.00	.00	.00
				min	-12901.7	.00	.00	.00	.00	.00
				max	-12901.7	.00	.00	.00	.00	.00
				min	-12901.7	.00	.00	.00	.00	.00
				max	-12901.7	.00	.00	.00	.00	.00
				min	-12901.7	.00	.00	.00	.00	.00
				max	-12901.7	.00	.00	.00	.00	.00
				min	-12901.7	.00	.00	.00	.00	.00
				max	-12901.7	.00	.00	.00	.00	.00
				min	-12901.7	.00	.00	.00	.00	.00
				max	-12901.7	.00	.00	.00	.00	.00
				min	-12901.7	.00	.00	.00	.00	.00
				max	-12901.7	.00	.00	.00	.00	.00
				min	-12901.7	.00	.00	.00	.00	.00
			LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1 LF1	max	-13049.7	.00	-96.06	.00	31.10	.00
				min	-13049.7	.00	.00	.00	.00	.00
				max	-13049.7	.00	-96.06	.00	.00	.00
				min	-13049.7	.00	.00	.00	.00	.00
				max	-13049.7	.00	-96.06	.00	.00	.00
				min	-13049.7	.00	.00	.00	.00	.00
				max	-13049.7	.00	-96.06	.00	.00	.00
				min	-13049.7	.00	.00	.00	.00	.00
				max	-13049.7	.00	-96.06	.00	.00	.00
				min	-13049.7	.00	.00	.00	.00	.00
				max	-13049.7	.00	-96.06	.00	.00	.00
				min	-13049.7	.00	.00	.00	.00	.00
				max	-13049.7	.00	-96.06	.00	.00	.00
				min	-13049.7	.00	.00	.00	.00	.00
				max	-13049.7	.00	-96.06	.00	.00	.00
				min	-13049.7	.00	.00	.00	.00	.00
				max	-13049.7	.00	-96.06	.00	.00	.00
				min	-13049.7	.00	.00	.00	.00	.00
				max	-13049.7	.00	-96.06	.00	.00	.00
				min	-13049.7	.00	.00	.00	.00	.00
			MAX MIN	MAX	-1687.30	.00	.00	.00	.00	.00
				MIN	-13049.7	.00	-96.06	.00	31.10	.00



Projekt: Allgemein	Position: WIPIC-L40-Gittermast 18m	Seite: 20
	Gittermast abgesp. L180-Typ L40	21.12.2000

MAX/MINZUGGEH-SCHNITTGRÖSSEN STABBEZOGEN

Stab-Nr.	Lk-Nr.	x [m]	N		Kräfte [N]	Q-3	T	Momente [Nm]	
			LF1	LF6	Q-2			M-2	M-3
7			LF1 in Max	LF1 LF6					
			LF1 in Min	LF1 LF6					
			MAX	-1687.30					
			MIN	-1687.30					
			LF1 in Max	LF1 LF6					
			LF1 in Min	LF1 LF6					
			MAX	-12901.7					
			MIN	-13049.7					
			LF1 in Max	LF1 LF6					
			LF1 in Min	LF1 LF6					
8	LK1		MAX	-13012.7					
			MIN	-12901.7					
			LF1 in Max	LF1 LF6					
			LF1 in Min	LF1 LF6					
			MAX	-1687.30					
			MIN	-1687.30					
			LF1 in Max	LF1 LF6					
			LF1 in Min	LF1 LF6					
			max	-1835.29					
			min	-7206.72					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-1835.29					
			min	-1835.29					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-7206.72					
			min	-1835.29					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-1835.29					
			min	-7206.72					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-1835.29					
			min	-1835.29					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-7354.72					
			min	-1983.29					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-7354.72					
			min	-1983.29					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-7354.72					
			min	-1983.29					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-1835.29					
			min	-7354.72					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-1835.29					
			min	-1835.29					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-7354.72					
			min	-1835.29					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-1835.29					
			min	-7354.72					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-1835.29					
			min	-1835.29					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-7354.72					
			min	-1835.29					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-1835.29					
			min	-1835.29					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-7354.72					
			min	-1835.29					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-7354.72					
			min	-1835.29					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-7354.72					
			min	-1835.29					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-1835.29					
			min	-1835.29					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-7354.72					
			min	-1835.29					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-7354.72					
			min	-1835.29					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-7354.72					
			min	-1835.29					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-7354.72					
			min	-1835.29					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-1835.29					
			min	-1835.29					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-7354.72					
			min	-1835.29					
			LF1 in Max	LF1 LF5					
			LF1 in Min	LF1 LF5					
			max	-7354.72					
			min	-1835.29					



Projekt: Allgemein

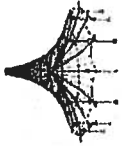
Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

Seite: 21

21.12.2000

MAX/MIN/ZUGEH-SCHNITTGRÖSSEN STABBEZOGEN

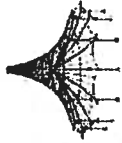
Stab-Nr.	LK-Nr.	x [m]	N	Kräfte [N]		Q-3	T	Momente [Nm]	
				Q-2	M-2			M-3	
8	LK3	.00	LF _e in Max LF ₁						
			LF _e in Min: LF ₁						
			max	-1835.29	.00	.00	.00	.00	
			min	-13049.7	.00	.00	.00	31.10	
			LF _e in Max LF ₁ LF ₈						
			LF _e in Min: LF ₁						
			max	-1835.29	.00	.00	.00	.00	
			min	-1835.29	.00	.00	.00	.00	
			LF _e in Max LF ₁						
			LF _e in Min: LF ₁						
			max	-1835.29	.00	.00	.00	.00	
			min	-13049.7	.00	.00	.00	31.10	
		3.00	LF _e in Max LF ₁ LF ₈						
			LF _e in Min: LF ₁						
			max	-1835.29	.00	.00	.00	.00	
			min	-13197.7	.00	.00	.00	-864.56	
			LF _e in Max LF ₁						
			LF _e in Min: LF ₁						
			max	-1835.29	.00	.00	.00	.00	
			min	-13197.7	.00	.00	.00	-864.56	
			LF _e in Max LF ₁						
			LF _e in Min: LF ₁						
			max	-1835.29	.00	.00	.00	.00	
			min	-13197.7	.00	.00	.00	-864.56	
		.00	LF _e in Max LF ₁						
			LF _e in Min: LF ₁						
			MAX	-1835.29	.00	.00	.00	.00	
			MIN	-13197.7	.00	.00	.00	-864.56	
			LF _e in Max LF ₁ LF ₈						
			LF _e in Min: LF ₁						
			MAX	-1835.29	.00	.00	.00	.00	
			MIN	-13197.7	.00	.00	.00	-864.56	
			LF _e in Max LF ₁						
			LF _e in Min: LF ₁						
			MAX	-1835.29	.00	.00	.00	.00	
			MIN	-13197.7	.00	.00	.00	-864.56	
		.00	LF _e in Max LF ₁						
			LF _e in Min: LF ₁						
			MAX	-1835.29	.00	.00	.00	.00	
			MIN	-13197.7	.00	.00	.00	-864.56	
			LF _e in Max LF ₁ LF ₈						
			LF _e in Min: LF ₁						
			MAX	-1835.29	.00	.00	.00	.00	
			MIN	-13197.7	.00	.00	.00	-864.56	
			LF _e in Max LF ₁						
			LF _e in Min: LF ₁						
			MAX	-1835.29	.00	.00	.00	.00	
			MIN	-13197.7	.00	.00	.00	-864.56	
9	LK1	.00	LF _e in Max LF ₁ LF ₅						
			LF _e in Min: LF ₁						
			max	4032.69	.00	.00	.00	.00	
			min	.00	.00	.00	.00	.00	
			LF _e in Max LF ₁						
			LF _e in Min: LF ₁						
			max	.00	.00	.00	.00	.00	
			min	.00	.00	.00	.00	.00	
			LF _e in Max LF ₁						
			LF _e in Min: LF ₁						
			max	4032.69	.00	.00	.00	.00	
			min	.00	.00	.00	.00	.00	



Projekt: Allgemein		Position: WIPIC-L40-Gittermast 18m Gittermast abgesp. L180-Typ L40	Seite: 22
			21.12.2000

MAX/MINZUGEH-SCHNITTGRÖSSEN STABBEZOGEN

Stab-Nr.	LK-Nr.	x [m]	N	Kräfte [N]		Q-3	T	Momente [Nm]	
				Q-2				M-2	M-3
9	LK3		LF _e in Max: LF ₁ LF ₅						
			LF _e in Min: LF ₁						
			max	.00	.00	.00	.00		
			min	.00	.00	.00	.00		
			LF _e in Max: LF ₁						
			LF _e in Min: LF ₁						
			max	.00	.00	.00	.00		
			min	.00	.00	.00	.00		
			LF _e in Max: LF ₁						
			LF _e in Min: LF ₁						
			MAX	4032.69	.00	.00	.00		
			MIN	.00	.00	.00	.00		
10	LK1	20.59	LF _e in Max: LF ₁ LF ₅						
			LF _e in Min: LF ₁						
			max	.00	.00	.00	.00		
			min	.00	.00	.00	.00		
			LF _e in Max: LF ₁						
			LF _e in Min: LF ₁						
			max	.00	.00	.00	.00		
			min	.00	.00	.00	.00		
			LF _e in Max: LF ₁						
			LF _e in Min: LF ₁						
			MAX	.00	.00	.00	.00		
			MIN	.00	.00	.00	.00		
10	LK1		LF _e in Max: LF ₁ LF ₅						
			LF _e in Min: LF ₁						
			max	.00	.00	.00	.00		
			min	.00	.00	.00	.00		
			LF _e in Max: LF ₁						
			LF _e in Min: LF ₁						
		20.59	max	.00	.00	.00	.00		
			min	.00	.00	.00	.00		
			LF _e in Max: LF ₁						
			LF _e in Min: LF ₁						
			MAX	.00	.00	.00	.00		
			MIN	.00	.00	.00	.00		



Projekt: Allgemein

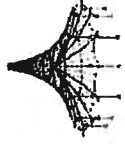
Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

Seite: 23

21.12.2000

MAX/MIN/ZUGGEH-SCHNITTGRÖSSEN STABBEZOGEN

Stab-Nr.	LK-Nr.	x [m]	Kräfte [N]		N	Momente [Nm]		T	M2	M3
			Q-2	Q-3		Q-2	Q-3			
10	LK3		LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			MAX			.00	.00			
			MIN			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			MAX			.00	.00			
			MIN			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			MAX			.00	.00			
			MIN			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00			
			LF _e in Max: LF ₁							
			LF _e in Min: LF ₁							
			max			.00	.00			
			min			.00	.00	</		



Projekt: Allgemein

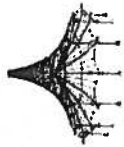
Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

Seite: 24

21.12.2000

MAX/MIN/ZUGGEH-SCHNITTGRÖSSEN STABBEZOGEN

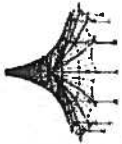
Stab-Nr.	Lk-Nr.	x [m]	Kräfte [N]		T	Momente [Nm]	
			N	Q-2		M-2	M-3
11	LK3		LF _e in Max: LF ₁				
			LF _e in Min: LF ₁				
			MAX	.00	.00	.00	
			MIN	.00	.00	.00	
			LF _e in Max: LF ₁				
			LF _e in Min: LF ₁				
			MAX	.00	.00	.00	
			MIN	.00	.00	.00	
			LF _e in Max: LF ₁				
			LF _e in Min: LF ₁				
			MAX	.00	.00	.00	
			MIN	.00	.00	.00	
		20.59	max	3879.10	.00	.00	
			min	.00	.00	.00	
			LF _e in Max: LF ₁ LF ₈				
			LF _e in Min: LF ₁				
			max	.00	.00	.00	
			min	.00	.00	.00	
			LF _e in Max: LF ₁				
			LF _e in Min: LF ₁				
			max	.00	.00	.00	
			min	.00	.00	.00	
			LF _e in Max: LF ₁ LF ₈				
			LF _e in Min: LF ₁				
			max	3879.10	.00	.00	
			min	.00	.00	.00	
			LF _e in Max: LF ₁ LF ₈				
			LF _e in Min: LF ₁				
			max	.00	.00	.00	
			min	.00	.00	.00	
			LF _e in Max: LF ₁				
			LF _e in Min: LF ₁				
			max	.00	.00	.00	
			min	.00	.00	.00	
			LF _e in Max: LF ₁ LF ₈				
			LF _e in Min: LF ₁				
		16.40	max	1817.32	.00	.00	
			min	.00	.00	.00	
			LF _e in Max: LF ₁ LF ₅				
			LF _e in Min: LF ₁				
			max	.00	.00	.00	
			min	.00	.00	.00	
			LF _e in Max: LF ₁				
			LF _e in Min: LF ₁				
			max	.00	.00	.00	
			min	.00	.00	.00	
			LF _e in Max: LF ₁ LF ₅				
			LF _e in Min: LF ₁				
	LK1		max	1817.32	.00	.00	
			min	.00	.00	.00	
			LF _e in Max: LF ₁ LF ₅				
			LF _e in Min: LF ₁				
			max	.00	.00	.00	
			min	.00	.00	.00	
			LF _e in Max: LF ₁				
			LF _e in Min: LF ₁				
			max	.00	.00	.00	
			min	.00	.00	.00	
			LF _e in Max: LF ₁ LF ₅				
			LF _e in Min: LF ₁				
			MAX	1817.32	.00	.00	
			MIN	.00	.00	.00	



Projekt: Allgemein	Position: WIPIC-L40-Gittermast 18m Gittermast abgesp. L180-Typ L40	Seite: 25
		21.12.2000

MAX/MIN/ZUGGEH-SCHNITTGRÖSSEN STABBEZOGEN

Stab-Nr.	Lk-Nr.	x [m]	Kräfte [N]		T	Momente [Nm]	
			N	Q-2		M-2	M-3
12	LK3	16.40	LF _e in Max: LF ₁ LF ₅ LF _e in Min: LF ₁				
			MAX MIN	.00 .00	.00 .00		
			LF _e in Max: LF ₁ LF _e in Min: LF ₁				
			MAX MIN	.00 .00	.00 .00		
			LF _e in Max: LF ₁ LF _e in Min: LF ₁				
			max min	.00 .00	.00 .00		
			LF _e in Max: LF ₁ LF _e in Min: LF ₁				
			max min	.00 .00	.00 .00		
			LF _e in Max: LF ₁ LF _e in Min: LF ₁				
			max min	.00 .00	.00 .00		
			LF _e in Max: LF ₁ LF _e in Min: LF ₁				
			max min	.00 .00	.00 .00		
13	LK1	16.40	LF _e in Max: LF ₁ LF ₅ LF _e in Min: LF ₁				
			MAX MIN	.00 .00	.00 .00		
			LF _e in Max: LF ₁ LF _e in Min: LF ₁				
			MAX MIN	.00 .00	.00 .00		
			LF _e in Max: LF ₁ LF _e in Min: LF ₁				
			max min	.00 .00	.00 .00		
			LF _e in Max: LF ₁ LF _e in Min: LF ₁				
			max min	.00 .00	.00 .00		
			LF _e in Max: LF ₁ LF _e in Min: LF ₁				
			max min	.00 .00	.00 .00		
			LF _e in Max: LF ₁ LF _e in Min: LF ₁				
			max min	.00 .00	.00 .00		



Projekt: Allgemein

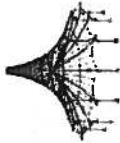
Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

Seite: 26

21.12.2000

MAX/MIN/ZUGGEH-SCHNITTGRÖSSEN STABBEZOGEN

Stab-Nr.	LK-Nr.	x [m]	N	Kräfte [N]		T	Momente [Nm]	
				Q-2	Q-3		M-2	M-3
13	LK3	.00	LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			MAX	.00	.00	.00		
			MIN	.00	.00	.00		
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			max	2181.77	.00	.00		
			min	.00	.00	.00		
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			max	.00	.00	.00		
			min	.00	.00	.00		
		16.40	max	2181.77	.00	.00		
			min	.00	.00	.00		
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			max	.00	.00	.00		
			min	.00	.00	.00		
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			max	.00	.00	.00		
			min	.00	.00	.00		
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
		.00	MAX	2181.77	.00	.00		
			MIN	.00	.00	.00		
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			MAX	.00	.00	.00		
			MIN	.00	.00	.00		
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			MAX	.00	.00	.00		
			MIN	.00	.00	.00		
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
	LK1	.00	max	.00	.00	.00		
			min	.00	.00	.00		
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			max	.00	.00	.00		
			min	.00	.00	.00		
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			max	.00	.00	.00		
			min	.00	.00	.00		
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
		16.40	max	.00	.00	.00		
			min	.00	.00	.00		
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			max	.00	.00	.00		
			min	.00	.00	.00		
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			max	.00	.00	.00		
			min	.00	.00	.00		
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
		.00	MAX	.00	.00	.00		
			MIN	.00	.00	.00		
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			MAX	.00	.00	.00		
			MIN	.00	.00	.00		
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					
			MAX	.00	.00	.00		
			MIN	.00	.00	.00		
			LF _e in Max: LF ₁					
			LF _e in Min: LF ₁					



Projekt: Allgemein

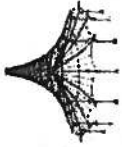
Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

Seite: 27

21.12.2000

MAX/MIN/ZUGGEH-SCHNITTGRÖSSEN STABBEZOGEN

Stab-Nr.	Lk-Nr.	x [m]	N	Kräfte [N]		T	Momente [Nm]		M-3
				Q-2	Q-3		M-2	M-3	
14	LK3	.00	LFs in Max: LF1 LFs in Min: LF1						
			max	2181.77	.00	.00			
			min		.00	.00			
			LFs in Max: LF1 LF6 LFs in Min: LF1						
			max	.00	.00	.00			
			min	.00	.00	.00			
			LFs in Max: LF1 LFs in Min: LF1						
			max	.00	.00	.00			
			min	.00	.00	.00			
			LFs in Max: LF1 LF6 LFs in Min: LF1						
			max	2181.77	.00	.00			
			min	.00	.00	.00			
15	LK1	.00	LFs in Max: LF1 LFs in Min: LF1						
			max	718.55	.00	.00			
			min		.00	.00			
			LFs in Max: LF1 LF5 LFs in Min: LF1						
			max	.00	.00	.00			
			min	.00	.00	.00			
			LFs in Max: LF1 LFs in Min: LF1						
			max	.00	.00	.00			
			min	.00	.00	.00			
			LFs in Max: LF1 LF5 LFs in Min: LF1						
			max	718.55	.00	.00			
			min	.00	.00	.00			
16	LK3	.00	LFs in Max: LF1 LFs in Min: LF1						
			max	718.55	.00	.00			
			min		.00	.00			
			LFs in Max: LF1 LF5 LFs in Min: LF1						
			max	.00	.00	.00			
			min	.00	.00	.00			
			LFs in Max: LF1 LFs in Min: LF1						
			max	.00	.00	.00			
			min	.00	.00	.00			
			LFs in Max: LF1 LF5 LFs in Min: LF1						
			max	718.55	.00	.00			
			min	.00	.00	.00			



Projekt: Allgemein

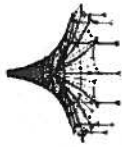
Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

Seite: 28

21.12.2000

MAX/MIN/ZUGGEH-SCHNITTGRÖSSEN STABBEZOGEN

Stab-Nr.	LK-Nr.	x [m]	N	Kräfte [N] Q-2	Q-3	T	Momente [Nm] M-2	M-3
15		12.21	LFs in Max: LF1 LFs in Min: LF1					
			max	.00	.00			
			min	.00	.00			
			LFs in Max: LF1 LFs in Min: LF1					
			max	.00	.00			
			min	.00	.00			
			LFs in Max: LF1 LFs in Min: LF1					
			max	.00	.00			
			min	.00	.00			
			LFs in Max: LF1 LFs in Min: LF1					
			max	.00	.00			
			min	.00	.00			
16	LK1	.00	MAX MIN	.00 .00	.00 .00			
			LFs in Max: LF1 LFs in Min: LF1					
			max	.00	.00			
			min	.00	.00			
			LFs in Max: LF1 LFs in Min: LF1					
			max	.00	.00			
			min	.00	.00			
			LFs in Max: LF1 LFs in Min: LF1					
			max	.00	.00			
			min	.00	.00			
			LFs in Max: LF1 LFs in Min: LF1					
			max	.00	.00			
17	LK3	.00	MAX MIN	.00 .00	.00 .00			
			LFs in Max: LF1 LFs in Min: LF1					
			max	.00	.00			
			min	.00	.00			
			LFs in Max: LF1 LFs in Min: LF1					
			max	.00	.00			
			min	.00	.00			
			LFs in Max: LF1 LFs in Min: LF1					
			max	.00	.00			
			min	.00	.00			
			LFs in Max: LF1 LFs in Min: LF1					
			max	.00	.00			



Projekt: Allgemein

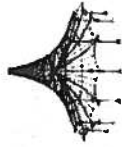
Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

Seite: 29

21.12.2000

MAX/MIN/ZUGGEH-SCHNITTGRÖSSEN STABBEZOGEN

Stab-Nr.	Lk-Nr.	x [m]	N	Kräfte [N]		T	Momente [Nm]	
				Q-2	Q-3		M-2	M-3
16		12.21	861.11	LF _e in Max: LF ₁	.00	.00		
				LF _e in Min: LF ₁	.00	.00		
				max	.00	.00		
				min	.00	.00		
				LF _e in Max: LF ₁	.00	.00		
				LF _e in Min: LF ₁	.00	.00		
				max	.00	.00		
				min	.00	.00		
				LF _e in Max: LF ₁	.00	.00		
				LF _e in Min: LF ₁	.00	.00		
				max	.00	.00		
				min	.00	.00		
17	LK1	12.21	861.11	MAX	.00	.00		
				MIN	.00	.00		
				LF _e in Max: LF ₁	.00	.00		
				LF _e in Min: LF ₁	.00	.00		
				max	.00	.00		
				min	.00	.00		
				LF _e in Max: LF ₁	.00	.00		
				LF _e in Min: LF ₁	.00	.00		
				max	.00	.00		
				min	.00	.00		
				LF _e in Max: LF ₁	.00	.00		
				LF _e in Min: LF ₁	.00	.00		
LK3		12.21	861.11	MAX	.00	.00		
				MIN	.00	.00		
				LF _e in Max: LF ₁	.00	.00		
				LF _e in Min: LF ₁	.00	.00		
				max	.00	.00		
				min	.00	.00		
				LF _e in Max: LF ₁	.00	.00		
				LF _e in Min: LF ₁	.00	.00		
				max	.00	.00		
				min	.00	.00		
				LF _e in Max: LF ₁	.00	.00		
				LF _e in Min: LF ₁	.00	.00		



Letrona AG

Postfach, CH-9504 FRILTSCHEN

Tel: 0041716546464 - Fax: 0041716546465

Projekt: Allgemein

Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

Seite: 30

21.12.2000

ERGEBNISSE

MAX/MIN/ZUGGEH-SCHNITTGRÖSSEN STABBEZOGEN

Stab-Nr.	Lk-Nr.	x [m]	Kräfte [N]		T	Momente [Nm]	
			N	Q-2		M-2	M-3
17		12.21	LFs in Max: LF1				
			LFs in Min: LF1				
			max	861.11	.00	.00	
			min	.00	.00	.00	
			LFs in Max: LF1 LF6				
			LFs in Min: LF1				
			max	.00	.00	.00	
			min	.00	.00	.00	
			LFs in Max: LF1				
			LFs in Min: LF1				
			max	.00	.00	.00	
			min	.00	.00	.00	
			LFs in Max: LF1				
			LFs in Min: LF1				
			max	.00	.00	.00	
			min	.00	.00	.00	
			LFs in Max: LF1				
			LFs in Min: LF1				
			max	.00	.00	.00	
			min	.00	.00	.00	
			MAX	861.11	.00	.00	
			MIN	.00	.00	.00	
			LFs in Max: LF1 LF6				
			LFs in Min: LF1				
			max	.00	.00	.00	
			min	.00	.00	.00	
			LFs in Max: LF1				
			LFs in Min: LF1				
			max	.00	.00	.00	
			min	.00	.00	.00	
			MAX	.00	.00	.00	
			MIN	.00	.00	.00	
			LFs in Max: LF1				
			LFs in Min: LF1				
			max	.00	.00	.00	
			min	.00	.00	.00	
			LFs in Max: LF1				
			LFs in Min: LF1				
			max	.00	.00	.00	
			min	.00	.00	.00	

MAX/MIN/ZUGGEH-AUFLAGERKRÄFTE UND -MOMENTE

Knoten-Nr.	Lk-Nr.	Auflagerkräfte [N]			Auflagermomente [Nm]		
		P-X	P-Y	P-Z	M-X	M-Y	M-Z
9	LK1	Max P-X	441.47	.00	.00	-657.12	.00
		Min P-X	.00	.00	.00	.00	.00
		LFs in Max P-X: LF1 LF5					
		LFs in Min P-X: LF1					
		Max P-Y	.00	.00	.00	.00	.00
		Min P-Y	.00	.00	.00	.00	.00
		LFs in Max P-Y: LF1					
		LFs in Min P-Y: LF1					
		Max P-Z	441.47	.00	.00	-657.12	.00
		Min P-Z	.00	.00	.00	.00	.00
		Max M-X	.00	.00	.00	.00	.00
		Min M-X	.00	.00	.00	.00	.00
		LFs in Max M-X: LF1					
		LFs in Min M-X: LF1					
		Max M-Y	.00	.00	.00	-657.12	.00
		Min M-Y	441.47	.00	.00	.00	.00
		LFs in Max M-Y: LF1					
		LFs in Min M-Y: LF1 LF5					
		Max M-Z	.00	.00	.00	.00	.00
		Min M-Z	.00	.00	.00	.00	.00
	LK3	Max P-X	.00	.00	.00	.00	.00
		Min P-X	-501.06	.00	.00	864.56	.00
		LFs in Max P-X: LF1					
		LFs in Min P-X: LF1 LF6					
		Max P-Y	.00	.00	.00	.00	.00
		Min P-Y	.00	.00	.00	.00	.00
		LFs in Max P-Y: LF1					
		LFs in Min P-Y: LF1					
		Max P-Z	-501.06	.00	.00	864.56	.00
		Min P-Z	.00	.00	.00	.00	.00
		Max M-X	.00	.00	.00	.00	.00
		Min M-X	.00	.00	.00	.00	.00
		LFs in Max M-X: LF1					
		LFs in Min M-X: LF1					
		Max M-Y	.00	.00	.00	.00	.00
		Min M-Y	-501.06	.00	.00	864.56	.00
		LFs in Max M-Y: LF1					
		LFs in Min M-Y: LF1 LF6					
		Max M-Z	.00	.00	.00	.00	.00
		Min M-Z	.00	.00	.00	.00	.00



ERGEBNISSE

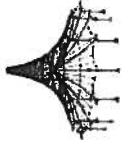
Position: WIPIC-L40-Gittermast 18m
Gittermast abgesp. L180-Typ L40

Seite: 31

21.12.2000

MAX/MINZUGEH-AUFLAGERKRÄFTE UND -MOMENTE

Knoten-Nr.	LK-Nr.		P-X	Auflagerkräfte [N]	P-Z	M-X	M-Y	M-Z
9	LK3	LFs in Min M-Y: LF1						
		Max M-Z	.00	.00	1983.29	.00	.00	.00
		Min M-Z	.00	.00	1983.29	.00	.00	.00
10	LK1	LFs in Max M-Z: LF1						
		LFs in Min M-Z: LF1						
		Max P-X	3685.77	.00	-5346.33	.00	.00	.00
	LK3	Min P-X	.00	.00	25.10	.00	.00	.00
		LFs in Max P-X: LF1						
		LFs in Min P-X: LF1						
	LK1	Max P-Y	.00	.00	25.10	.00	.00	.00
		Min P-Y	.00	.00	25.10	.00	.00	.00
		LFs in Max P-Y: LF1						
	LK3	LFs in Min P-Y: LF1						
		Max P-Z	.00	.00	25.10	.00	.00	.00
		Min P-Z	3685.77	.00	-5346.33	.00	.00	.00
	LK1	LFs in Max P-Z: LF1						
		LFs in Min P-Z: LF1						
		Max P-X	.00	.00	25.10	.00	.00	.00
	LK3	Min P-X	.00	.00	25.10	.00	.00	.00
		LFs in Max P-X: LF1						
		LFs in Min P-X: LF1						
	LK1	Max P-Y	.00	.00	25.10	.00	.00	.00
		Min P-Y	.00	.00	25.10	.00	.00	.00
		LFs in Max P-Y: LF1						
	LK3	LFs in Min P-Y: LF1						
		Max P-Z	.00	.00	25.10	.00	.00	.00
		Min P-Z	.00	.00	25.10	.00	.00	.00
	LK1	LFs in Max P-Z: LF1						
		LFs in Min P-Z: LF1						
		Max P-X	.00	.00	25.10	.00	.00	.00
	LK3	Min P-X	-1987.77	.00	-5582.08	.00	.00	.00
		LFs in Max P-X: LF1						
		LFs in Min P-X: LF1						
	LK1	Max P-Y	.00	.00	25.10	.00	.00	.00
		Min P-Y	.00	.00	25.10	.00	.00	.00
		LFs in Max P-Y: LF1						
	LK3	LFs in Min P-Y: LF1						
		Max P-Z	.00	.00	25.10	.00	.00	.00
		Min P-Z	.00	.00	25.10	.00	.00	.00
	LK1	LFs in Max P-Z: LF1						
		LFs in Min P-Z: LF1						
		Max P-X	.00	.00	25.10	.00	.00	.00
	LK3	Min P-X	-1987.77	.00	-5582.08	.00	.00	.00
		LFs in Max P-X: LF1						
		LFs in Min P-X: LF1						
	LK1	Max P-Y	.00	.00	25.10	.00	.00	.00
		Min P-Y	.00	.00	25.10	.00	.00	.00
		LFs in Max P-Y: LF1						
	LK3	LFs in Min P-Y: LF1						
		Max P-Z	.00	.00	25.10	.00	.00	.00
		Min P-Z	.00	.00	25.10	.00	.00	.00
	LK1	LFs in Max P-Z: LF1						
		LFs in Min P-Z: LF1						
		Max P-X	.00	.00	25.10	.00	.00	.00
	LK3	Min P-X	-1987.77	.00	-5582.08	.00	.00	.00
		LFs in Max P-X: LF1						
		LFs in Min P-X: LF1						
	LK1	Max P-Y	.00	.00	25.10	.00	.00	.00
		Min P-Y	.00	.00	25.10	.00	.00	.00
		LFs in Max P-Y: LF1						
	LK3	LFs in Min P-Y: LF1						
		Max P-Z	.00	.00	25.10	.00	.00	.00
		Min P-Z	.00	.00	25.10	.00	.00	.00
	LK1	LFs in Max P-Z: LF1						
		LFs in Min P-Z: LF1						
		Max P-X	.00	.00	25.10	.00	.00	.00
	LK3	Min P-X	-1987.77	.00	-5582.08	.00	.00	.00
		LFs in Max P-X: LF1						
		LFs in Min P-X: LF1						
	LK1	Max P-Y	.00	.00	25.10	.00	.00	.00
		Min P-Y	.00	.00	25.10	.00	.00	.00
		LFs in Max P-Y: LF1						
	LK3	LFs in Min P-Y: LF1						
		Max P-Z	.00	.00	25.10	.00	.00	.00
		Min P-Z	.00	.00	25.10	.00	.00	.00
	LK1	LFs in Max P-Z: LF1						
		LFs in Min P-Z: LF1						
		Max P-X	.00	.00	25.10	.00	.00	.00
	LK3	Min P-X	-1987.77	.00	-5582.08	.00	.00	.00
		LFs in Max P-X: LF1						
		LFs in Min P-X: LF1						
	LK1	Max P-Y	.00	.00	25.10	.00	.00	.00
		Min P-Y	.00	.00	25.10	.00	.00	.00
		LFs in Max P-Y: LF1						
	LK3	LFs in Min P-Y: LF1						
		Max P-Z	.00	.00	25.10	.00	.00	.00
		Min P-Z	.00	.00	25.10	.00	.00	.00
	LK1	LFs in Max P-Z: LF1						
		LFs in Min P-Z: LF1						
		Max P-X	.00	.00	25.10	.00	.00	.00
	LK3	Min P-X	-1987.77	.00	-5582.08	.00	.00	.00
		LFs in Max P-X: LF1						
		LFs in Min P-X: LF1						
	LK1	Max P-Y	.00	.00	25.10	.00	.00	.00
		Min P-Y	.00	.00	25.10	.00	.00	.00
		LFs in Max P-Y: LF1						
	LK3	LFs in Min P-Y: LF1						
		Max P-Z	.00	.00	25.10	.00	.00	.00
		Min P-Z	.00	.00	25.10	.00	.00	.00
	LK1	LFs in Max P-Z: LF1						
		LFs in Min P-Z: LF1						
		Max P-X	.00	.00	25.10	.00	.00	.00
	LK3	Min P-X	-1987.77	.00	-5582.08	.00	.00	.00
		LFs in Max P-X: LF1						
		LFs in Min P-X: LF1						
	LK1	Max P-Y	.00	.00	25.10	.00	.00	.00
		Min P-Y	.00	.00	25.10	.00	.00	.00
		LFs in Max P-Y: LF1						
	LK3	LFs in Min P-Y: LF1						
		Max P-Z	.00	.00	25.10	.00	.00	.00
		Min P-Z	.00	.00	25.10	.00	.00	.00
	LK1	LFs in Max P-Z: LF1						
		LFs in Min P-Z: LF1						
		Max P-X	.00	.00	25.10	.00	.00	.00
	LK3	Min P-X	-1987.77	.00	-5582.08	.00	.00	.00
		LFs in Max P-X: LF1						
		LFs in Min P-X: LF1						
	LK1	Max P-Y	.00	.00	25.10	.00	.00	.00
		Min P-Y	.00	.00	25.10	.00	.00	.00
		LFs in Max P-Y: LF1						
	LK3	LFs in Min P-Y: LF1						
		Max P-Z	.00	.00	25.10	.00	.00	.00
		Min P-Z	.00	.00	25.10	.00	.00	.00
	LK1	LFs in Max P-Z: LF1						
		LFs in Min P-Z: LF1						
		Max P-X	.00	.00	25.10	.00	.00	.00
	LK3	Min P-X	-1987.77	.00	-5582.08	.00	.00	.00
		LFs in Max P-X: LF1						
		LFs in Min P-X: LF1						
	LK1	Max P-Y	.00	.00	25.10	.00	.00	.00
		Min P-Y	.00	.00	25.10	.00	.00	.00
		LFs in Max P-Y: LF1						
	LK3	LFs in Min P-Y: LF1						
		Max P-Z	.00	.00	25.10	.00	.00	.00
		Min P-Z	.00	.00	25.10	.00	.00	.00
	LK1	LFs in Max P-Z: LF1						
		LFs in Min P-Z: LF1						
		Max P-X	.00	.00	25.10	.00	.00	.00
	LK3	Min P-X	-1987.77	.00	-5582.08	.00	.00	.00
		LFs in Max P-X: LF1						
		LFs in Min P-X: LF1						
	LK1	Max P-Y	.00	.00	25.10	.00	.00	.00
		Min P-Y	.00	.00	25.10	.00	.00	.00
		LFs in Max P-Y: LF1						
	LK3	LFs in Min P-Y: LF1						
		Max P-Z	.00	.00	25.10	.00	.00	.00
		Min P-Z	.00	.00	25.10	.00	.00	.00
	LK1	LFs in Max P-Z: LF1						
		LFs in Min P-Z: LF1						
		Max P-X	.00	.00	25.10	.00	.00	.00
	LK3	Min P-X	-1987.77	.00	-5582.08	.00	.00	.00
		LFs in Max P-X: LF1						
		LFs in Min P-X: LF1						
	LK1	Max P-Y	.00	.00	25.10	.00	.00	.00
		Min P-Y	.00	.00	25.10	.00	.00	.00
		LFs in Max P-Y: LF1						
	LK3	LFs in Min P-Y: LF1						
		Max P-Z	.00	.00	25.10	.00	.00	.00
		Min P-Z	.00	.00	25.10	.00	.00	.00
	LK1	LFs in Max P-Z: LF1						
		LFs in Min P-Z: LF1						
		Max P-X	.00	.00	25.10	.00	.00	.00
	LK3	Min P-X	-1987.77	.00	-5582.08	.00	.00	.00
		LFs in Max P-X: LF1						
		LFs in Min P-X: LF1						
	LK1	Max P-Y	.00	.00	25.10	.00	.00	.00
		Min P-Y	.00	.00	25.10	.00	.00	.00
		LFs in Max P-Y: LF1						
	LK3	LFs in Min P-Y: LF1						
		Max P-Z	.00	.00	25.10	.00	.00	.00
		Min P-Z	.00	.00	25.10	.00	.00	.00
	LK1	LFs in Max P-Z: LF1						
		LFs in Min P-Z: LF1						
		Max P-X	.00	.00	25.10	.00	.00	.00
	LK3	Min P-X	-1987.77	.00	-5582.08	.00	.00	.00
		LFs in Max P-X: LF1						
		LFs in Min P-X: LF1						
	LK1	Max P-Y	.00	.00	25.10	.00	.00	.00
		Min P-Y	.00	.00	25.10	.00	.00	.00
		LFs in Max P-Y: LF1						
	LK3	LFs in Min P-Y: LF1						
		Max P-Z	.00	.00	25.10	.00	.00	.00
		Min P-Z	.00	.00	25.10	.00	.00	.00
	LK1	LFs in Max P-Z: LF1						
		LFs in Min P-Z: LF1						
		Max P-X	.00	.00	25.10	.00	.00	.00
	LK3	Min P-X	-1987.77	.00	-5582.08	.00	.00	.00
		LFs in Max P-X: LF1						
		LFs in Min P-X: LF1						
	LK1	Max P-Y	.00	.00	25.10	.00	.00	.00
		Min P-Y	.00	.00	25.10	.00	.00	.00
		LFs in Max P-Y: LF1						
	LK3	LFs in Min P-Y: LF1						
		Max P-Z	.00	.00	25.10	.00	.00	.00
		Min P-Z	.00	.00	25.10	.00	.00	.00
	LK1	LFs in Max P-Z: LF1						
		LFs in Min P-Z: LF1						
		Max P-X	.00	.00	25.10	.00	.00	.00
	LK3	Min P-X	-1987.77	.00	-5582.08	.00	.00	.00
		LFs in Max P-X: LF1						
		LFs in Min P-X: LF1						
	LK1	Max P-Y	.00	.00	25.10	.00	.00	.00
		Min P-Y	.00	.00	25.10	.00	.00	.00
		LFs in Max P-Y: LF1						
	LK3	LFs in Min P-Y: LF1						
		Max P-Z	.00	.00	25.10	.00	.00	.00
		Min P-Z	.00	.00	25.10	.00	.00	.00
	LK1	LFs in Max P-Z: LF1						
		LFs in Min P-Z: LF1						
		Max P-X	.00	.00	25.10	.00	.00	.00
	LK3	Min P-X	-1987.77	.00	-5582.08	.00	.00	.00
		LFs in Max P-X: LF1						
		LFs in Min P-X: LF1						
	LK1	Max P-Y	.00	.00	25.10	.00	.00	.00
		Min P-Y	.00	.00	25.10	.00	.00	.00
		LFs in Max P-Y: LF1						
	LK3	LFs in Min P-Y: LF1						
		Max P-Z	.00	.00	25.10	.00	.00	.00
		Min P-Z	.00	.00	25.10	.00	.00	.00
	LK1	LFs in Max P-Z: LF1						
		LFs in Min P-Z: LF1					</	



Projekt: Allgemein		Position: WIPIC-L40-Gittermast 18m Gittermast abgesp. L180-Typ L40	Seite: 32 21.12.2000
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MAX/MINZUGEH-AUFLAGERKÄFTE UND -MOMENTE

Knoten- Nr.	LK- Nr.	Auflagerkräfte [N]			Auflagemomente [Nm]		
		P-X	P-Y	P-Z	M-X	M-Y	M-Z
12	LK3	LFs in Min P-Z: LF1 LF8					

MAX/MIN GLOBALE KNOTENVERFORMUNGEN

Knoten- Nr.	LK- Nr.		Verschiebungen [mm]			Verdrehungen [mrad]		
			u-X	u-Y	u-Z	φ-X	φ-Y	φ-Z
1	LK1	Max	65.52726	.00000	2.24130	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.54622	.00000	-10.07370	.00000
		Max	.00000	.00000	4.01236	.00000	17.70197	.00000
2	LK1	Max	-1.31E+02	.00000	.54622	.00000	.00000	.00000
	LK3	Min	35.77356	.00000	1.96323	.00000	.00000	.00000
		Max	.00000	.00000	.47885	.00000	-9.33761	.00000
3	LK1	Max	.00000	.00000	3.53966	.00000	.00000	.00000
	LK3	Min	-79.28015	.00000	.47885	.00000	.00000	.00000
		Max	19.64162	.00000	1.77293	.00000	.00000	.00000
4	LK1	Max	.00000	.00000	.42901	.00000	.00000	.00000
	LK3	Min	.00000	.00000	3.21959	.00000	-6.20259	.00000
		Max	-50.03429	.00000	.42901	.00000	12.04444	.00000
5	LK1	Max	14.54348	.00000	.42901	.00000	.00000	.00000
	LK3	Min	.00000	.00000	1.64708	.00000	.00000	.00000
		Max	-39.51069	.00000	.40212	.00000	-4.17903	.00000
6	LK1	Max	6.79251	.00000	2.98864	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.40212	.00000	.00000	.00000
		Max	.00000	.00000	1.26364	.00000	.00000	.00000
7	LK1	Max	.00000	.00000	.31553	.00000	.00000	.00000
	LK3	Min	.00000	.00000	2.28989	.00000	-1.61191	.00000
		Max	-19.45186	.00000	.31553	.00000	4.88741	.00000
8	LK1	Max	4.44646	.00000	1.00308	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.25288	.00000	.00000	.00000
		Max	.00000	.00000	1.81913	.00000	-6.2847	.00000
9	LK1	Max	-11.58084	.00000	.25288	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.86274	.00000	.00000	.00000
		Max	4.06364	.00000	.21971	.00000	-2.2504	.00000
10	LK1	Max	.00000	.00000	1.56221	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.21971	.00000	1.96879	.00000
		Max	-9.24627	.00000	.43560	.00000	.00000	.00000
11	LK1	Max	2.63938	.00000	.11428	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.78553	.00000	-9.5704	.00000
		Max	.00000	.00000	.11428	.00000	1.81192	.00000
12	LK1	Max	-4.05025	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
13	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
14	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
15	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
16	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
17	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
18	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
19	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
20	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
21	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
22	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
23	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
24	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
25	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
26	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
27	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
28	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
29	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
30	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
31	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
32	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
33	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
34	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
35	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
36	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
37	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
38	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
39	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
40	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
41	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
42	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
43	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
44	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
45	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
46	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
47	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
48	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
49	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
50	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
51	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK3	Min	.00000	.00000	.00000	.00000	.00000	.00000
		Max	.00000	.00000	.00000	.00000	.00000	.00000
52	LK1	Max	.00000	.00000	.00000	.00000	.00000	.00000
	LK							

